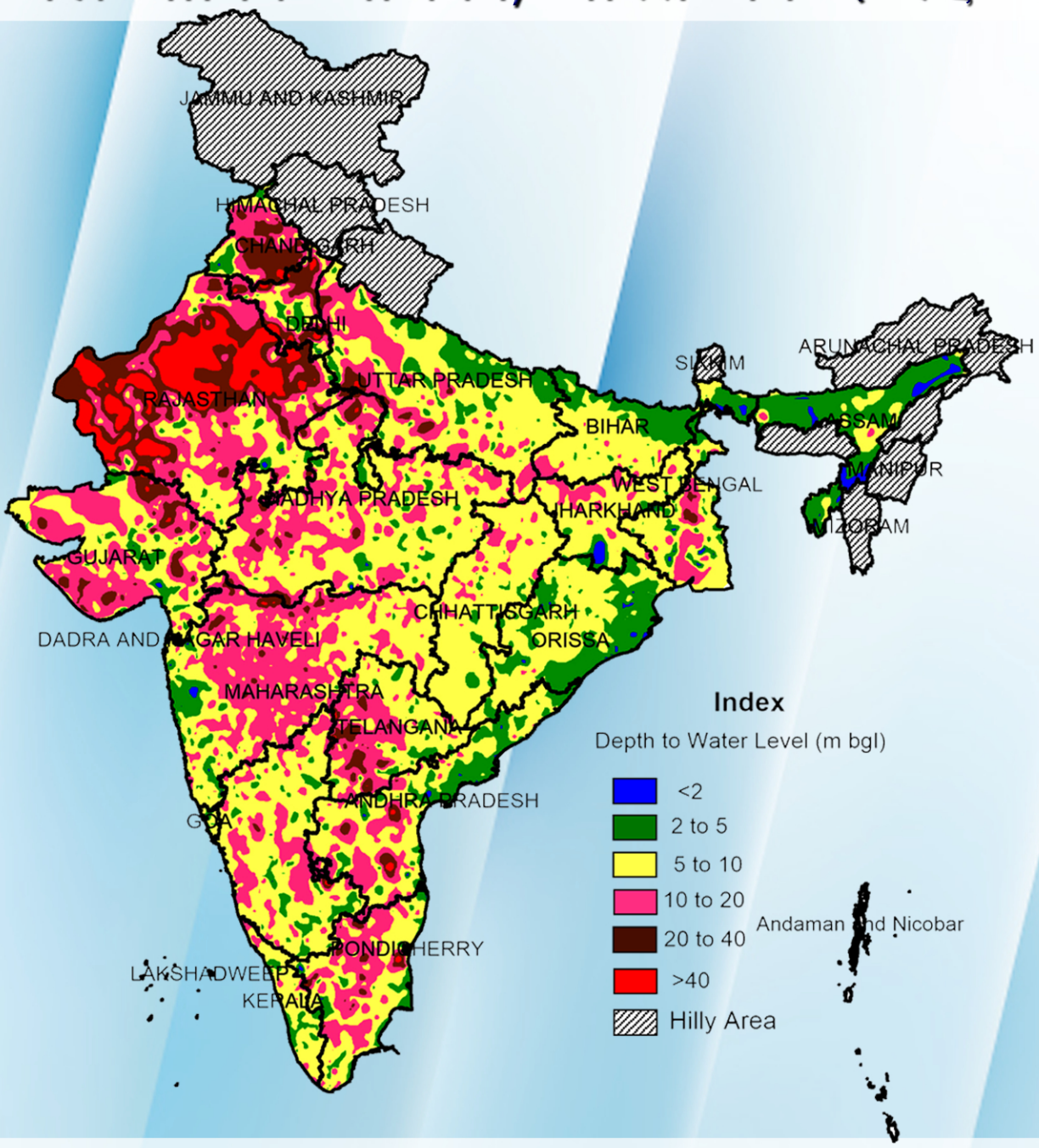
Ground Water Year Book - India 2019-20

भू–जल वार्षिक पत्रिका, भारत वर्ष २०१९–२०



Central Ground Water Board

Ministry of Jal Shakti, Department of Water Resources,
River Development and Ganga Rejuvenation
Government of India
Faridabad

GROUND WATER YEAR BOOK
INDIA 2019-20

CONTENTS

1. HYDROGEOLOGICAL SETUP OF THE COUNTRY

1.1 GROUND WATER OCCURRENCE

The ground water behavior in the Indian sub-continent is highly complicated due to the occurrence of diversified geological formations with considerable lithological and chronological variations, complex tectonic framework, climatological dissimilarities and various hydrochemical conditions. Studies carried out over the years have revealed that aquifer groups in alluvial / soft rocks even transcend the surface basin boundaries. Broadly two groups of rock formations have been identified depending on characteristically different hydraulics of ground water, Viz. Porous Formations and Fissured Formations.

1.1.1 POROUS FORMATION

Porous formations have been further subdivided into Unconsolidated and Semi-consolidated formations.

UNCONSOLIDATED FORMATIONS

The areas covered by alluvial sediments of river basins, coastal and deltaic tracts constitute the unconsolidated formations. These are by far the most significant ground water reservoirs for large scale and extensive development. The hydrogeological environment and ground water regime in the Indo-Ganga-Brahmaputra basin indicate the existence of potential aquifers having enormous fresh ground water reserve. Bestowed with high incidence of rainfall and covered by a thick pile of porous sediments, these ground water reservoirs get replenished every year and are being used heavily. In these areas, in addition to the Annual Replenishable Ground Water Resources available in the zone of water level fluctuation (Dynamic Ground Water Resource), there exists a huge ground water reserve in the deeper passive recharge zone below the zone of fluctuation as well as in the deeper confined aquifers which remains largely unexplored as yet. Although the mode of development of ground water is primarily through dug wells, dug cum bore well and cavity wells, thousands of tube wells have been constructed during last few decades.

SEMI-CONSOLIDATED FORMATIONS

The semi-consolidated formations normally occur in narrow valleys or structurally faulted basins. The Gondwanas, Lathis, Tipams, Cuddalore sandstones and their equivalents are the most extensive productive aquifers in this category. Under favorable situations, these formations give rise to free flowing wells. In selected tracts of northeastern India, these water-bearing formations are quite productive. The Upper Gondwanas, which are generally arenaceous, in general, constitute prolific aquifers.

1.1.2 FISSURED FORMATIONS (CONSOLIDATED FORMATIONS)

The consolidated formations occupy almost two-thirds of the country. These formations, except vesicular volcanic rocks have negligible primary porosity. From the hydrogeological point of view, fissured rocks are broadly classified into four types viz. Igneous and metamorphic rocks (excluding volcanic and carbonate rocks), volcanic rocks, consolidated sedimentary rocks and Carbonate rocks.

IGNEOUS AND METAMORPHIC ROCKS EXCLUDING VOLCANIC AND CARBONATE ROCKS

The most common rock types under this category are granites, gneisses, charnockites, khondalites, quartzites, schists and associated phyllites, slates, etc. These rocks possess negligible primary porosity but attain porosity and permeability due to fracturing and weathering. Ground water yield also depends on the rock type and grade of metamorphism. Generally, the granites, Khondalites and biotite gneisses have better yield potential as compared to charnockites.

VOLCANIC ROCKS

The predominant types of volcanic rocks are the basaltic lava flows of Deccan Plateau. The highly variable water bearing properties of different flow units control ground water occurrence in Deccan Traps. The Deccan Traps have usually poor to moderate permeability depending on the presence of primary and secondary fractures.

CONSOLIDATED SEDIMENTARY ROCKS EXCLUDING CARBONATE ROCKS

Consolidated sedimentary rocks occur in Cuddapahs, Vindhyans and their equivalents. The formations consist of conglomerates, sandstones, shales. The presence of bedding planes, joints, contact zones and fractures controls the ground water occurrence, movement and yield potential.

CARBONATE ROCKS

Limestones in the Cuddapah, Vindhyan and Bijawar group of rocks dominates the carbonate rocks other than marbles and dolomites. In carbonate rocks, the circulation of water creates solution cavities thereby increasing the permeability of the aquifers. The solution activity leads to widely contrasting permeabilities within short distances.

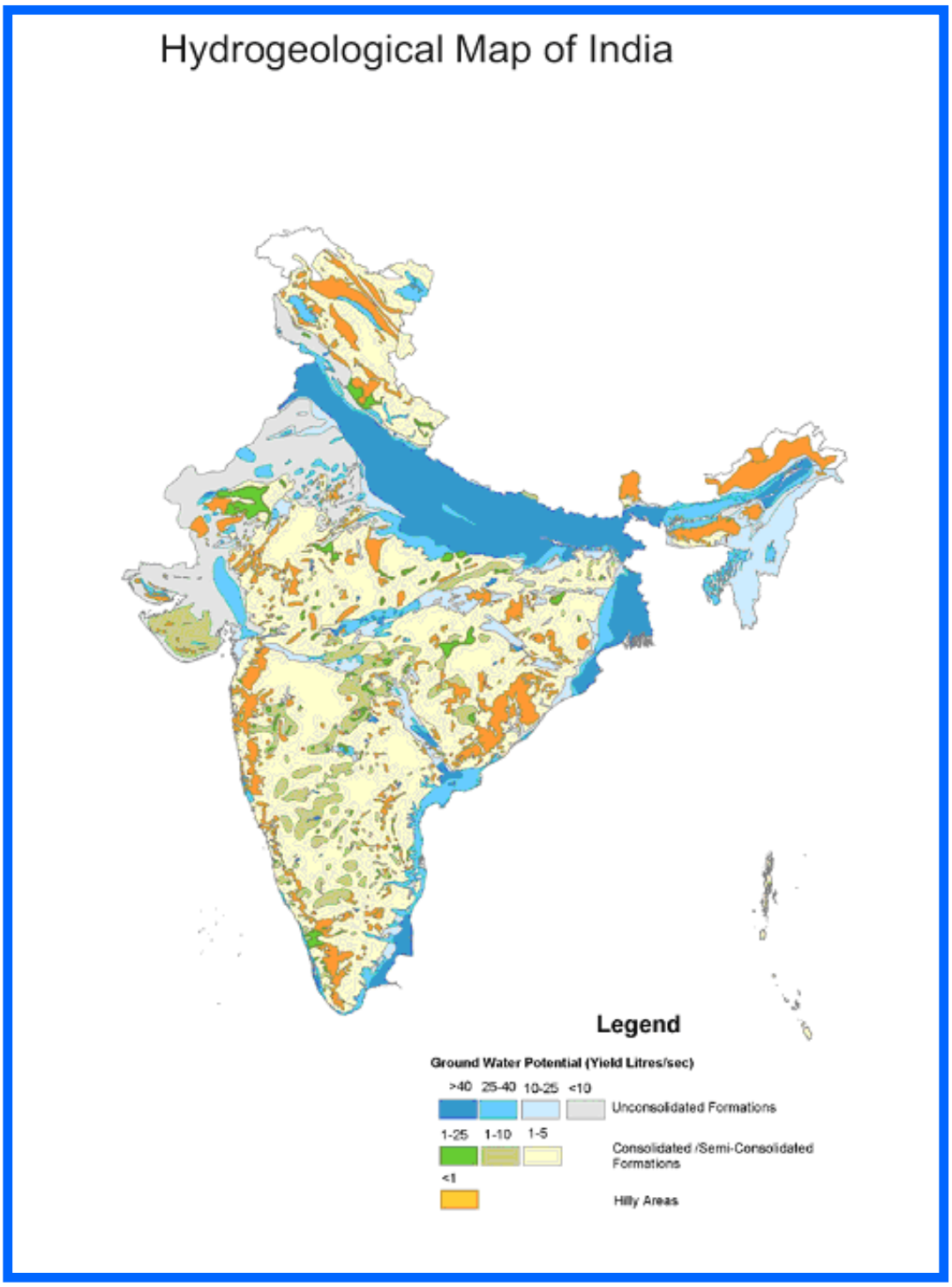
1.2 HYDROGEOLOGICAL UNITS AND THEIR GROUND WATER POTENTIAL

Hydrogeological map of India is depicted in Plate-I and the geographical distribution of hydrogeological units along with their Ground water potential is given in Table 1.

TABLE 1: AQUIFER SYSTEM IN THE COUNTRY

System	Coverage	Ground water potential
Unconsolidated formations - alluvial	Indo-Gangetic, Brahmaputra plains	Enormous reserves down to 600 m depth. High rain fall and hence recharge is ensured. Can support large-scale development through deep tube wells
	Coastal Areas	Reasonably extensive aquifers but risk of saline water intrusion
	Part of Desert area – Rajasthan and Gujarat	Scanty rainfall. Negligible recharge. Salinity hazards. Ground water Availability at great depths.
Consolidated/semi-consolidated formations - sedimentaries, basalts and crystalline rocks	Peninsular Areas	Availability depends on secondary porosity developed due to weathering, fracturing etc. Scope for GW availability at shallow depths (20-40 m) in some areas and deeper depths (100-200 m) in other areas. Varying yields.
Hilly	Hilly states	Low storage capacity due to quick runoff

PLATE - I


Hydrogeological Map of India
Legend
Ground Water Potential (Yield Litres/sec)
>40 25-40 10-25 <10
Unconsolidated Formations
1-25 1-10 1-5
Consolidated /Semi-Consolidated Formations
<1
Hilly Areas

2.0 GROUND WATER LEVEL SCENARIO

2.1 INTRODUCTION

Ground Water Year Book is prepared annually by CGWB depicting changes in ground water regime of the country through different seasons. It is an effort to obtain information on ground water levels through representative monitoring wells. The important attributes of ground water regime monitoring are ground water level.

The natural conditions affecting the regime involve climatic parameters like rainfall, evapotranspiration etc., whereas anthropogenic influences include pumpage from the aquifer, recharge due to irrigation systems and other practices like waste disposal etc.

Ground water levels are being measured by Central Ground Water Board four times a year during January, March/April/ May, August and November. The regime monitoring started in the year 1969 by Central Ground Water Board. A network of 22730 observation wells, as on 31.03.2020, located all over the country is being monitored. Ground water samples are collected from these observation wells once a year during the month of March/April/ May to obtain background information of ground water quality changes on regional scale. The database thus generated forms the basis for planning the ground water development and management programmes. The ground water level and quality monitoring is of particular importance in coastal as well inland saline environment to assess the changes in salt water/fresh water interface as also the gradual quality changes in the fresh ground water regime. This data is used for assessment of ground water resources and changes in the regime consequent to various development and management activities.

The premonsoon water level data is collected from all the monitoring stations during the months of March/ April/ May, depending on the climatological conditions of the region. For North eastern states premonsoon data is collected during March, since the onset of monsoon is normally observed in April. Similarly for Orissa, West Bengal and Kerala where monsoon appears early in May the monitoring is carried out during the month of April. For remaining states premonsoon monitoring month is May. Water levels during August are monitored to access the impact of monsoon on the ground water resources. Post monsoon data collected during November reflects the cumulative effect of ground water recharge and withdrawal of ground water for various purposes. January water level data indicates the effect of withdrawal for rabi crops.

The data is analyzed to know about the frequency distribution of water levels during different periods and seasonal, annual and decadal fluctuations in water levels. The water level and water level fluctuation maps are prepared for each monitoring period to study the spatial and temporal changes in ground water regime.

The State/UT-wise distribution of the ground water observation wells is given in table- 2 and depicted in Plate II.

PLATE - II

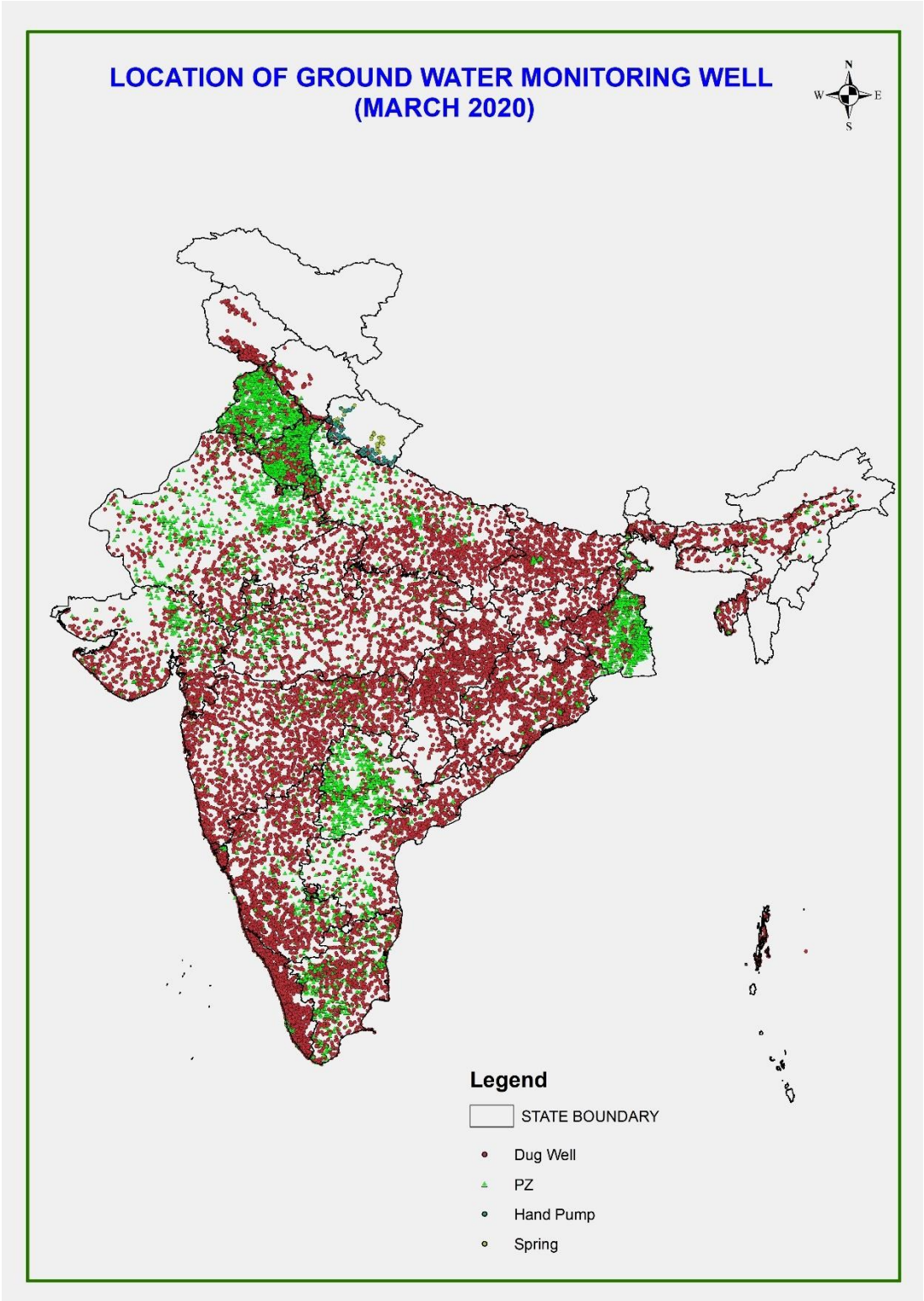

LOCATION OF GROUND WATER MONITORING WELL
(MARCH 2020)
N
W
E
S
Legend
STATE BOUNDARY
Dug Well
PZ
Hand Pump
Spring

TABLE-2

STATE/UT -WISE STATUS OF GROUND WATER MONITORING WELLS

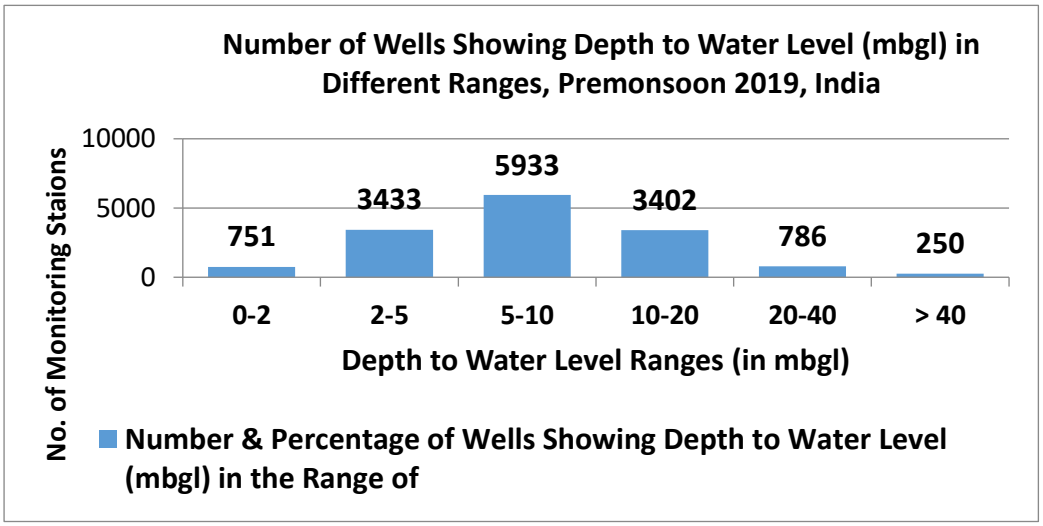
Status of Ground Water Monitoring Stations (March 2020)				
Sl No	**Name of the State/UTs**	**Number of Ground Water Monitoring Stations**		
		DW	**PZ**	**Total**
1	Andhra Pradesh	674	164	**838**
2	Arunachal Pradesh	23	4	**27**
3	Assam	361	24	**385**
4	Bihar	734	23	**757**
5	Chhattisgarh	1157	268	**1425**
6	Delhi	17	84	**101**
7	Goa	88	44	**132**
8	Gujarat	638	266	**904**
9	Haryana	536	785	**1321**
10	Himachal Pradesh	128	0	**128**
11	Jammu & Kashmir	287	11	**298**
12	Jharkhand	447	20	**467**
13	Karnataka	1413	262	**1675**
14	Kerala	1381	221	**1602**
15	Madhya Pradesh	1203	316	**1519**
16	Maharashtra	1739	180	**1919**
17	Manipur	0	0	**0**
18	Meghalaya	56	11	**67**

19	Nagaland	22	8	**30**
20	Odisha	1510	92	**1602**
21	Punjab	205	850	**1055**
22	Rajasthan	709	556	**1265**
23	Tamil Nadu	814	472	**1286**
24	Telangana	306	442	**748**
25	Tripura	102	13	**115**
26	Uttar Pradesh	871	260	**1131**
27	Uttarakhand	39	166	**205**
28	West Bengal	766	765	**1531**
1	Andaman & Nicobar	111	2	**113**
2	Chandigarh	1	36	**37**
3	Dadra & Nagar Haveli	17	0	**17**
4	Daman & Diu	11	3	**14**
5	Pondicherry	9	7	**16**
TOTAL		**16375**	**6355**	**22730**

2.2 DEPTH TO WATER LEVEL

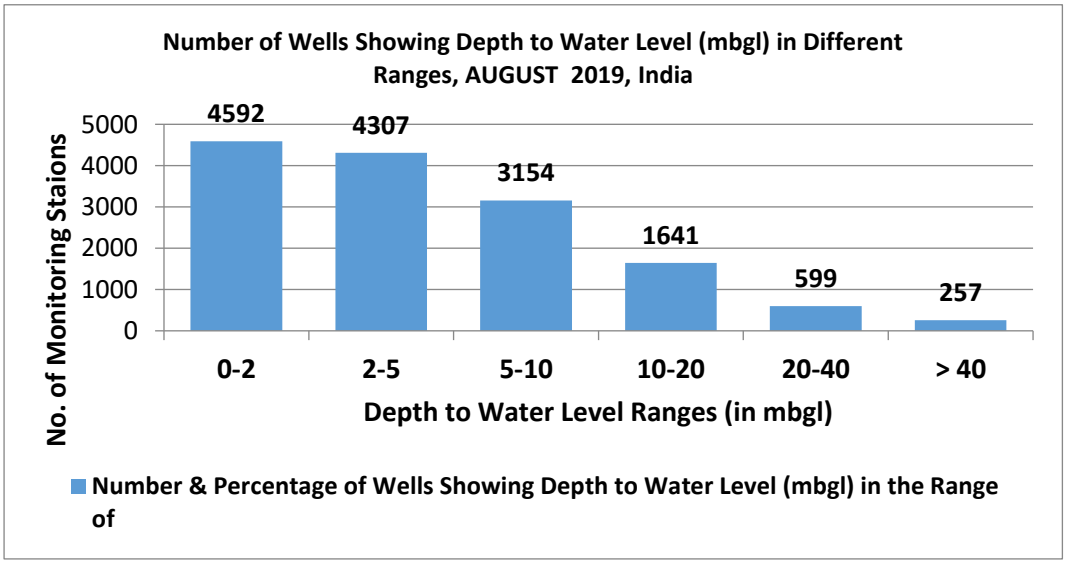
DEPTH TO WATER LEVEL – PRE MONSOON 2019

The ground water level data for Premonsoon 2019 indicates that out of the total **14555** wells analysed, 751 (5%) wells are showing water level less than 2 m bgl (metres below ground level), 3433 (24%) wells are showing water level in the depth range of 2-5 m bgl, 5933 (41 %) wells are showing water level in the depth range of 5-10 m bgl, 3402 (23%) wells are showing water level in the depth range of 10-20 m bgl, 786 (5%) wells are showing water level in the depth range of 20-40 m bgl and the remaining 250 (2%) wells are showing water level more than 40 m bgl. The maximum depth to water level of 128.15 m bgl is observed in Bikaner district of Rajasthan whereas the minimum is less than 1 m bgl **(Plate IV, Annexure I).** Ground water level data of Premonsoon 2019 for the country reveals that the general depth to water level of the country ranges from 5 to 10 m bgl. Very shallow water level of less than 2 m bgl (5%) is observed in few states, such as Assam, Odisha, Jharkhand and Tripura in small patches. Ground Water level in the range of 2-5 m bgl (24%) is seen in Assam, northern parts of Uttar Pradesh and Bihar, Coastal parts of Odisha, few pockets in Andhra Pradesh, Gujarat and Maharashtra. Major part of the country shows water level in the range 5-10 m bgl (41%), especially in the states of Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Odisha, Chhattisgarh, Maharashtra, Gujarat, Tamil Nadu, Telangana and Karnataka. In major parts of north-western and western states, especially in the states of Delhi, Haryana, Punjab and Rajasthan, depth to water level is generally deeper and ranges from about 20 to more than 40 m bgl.



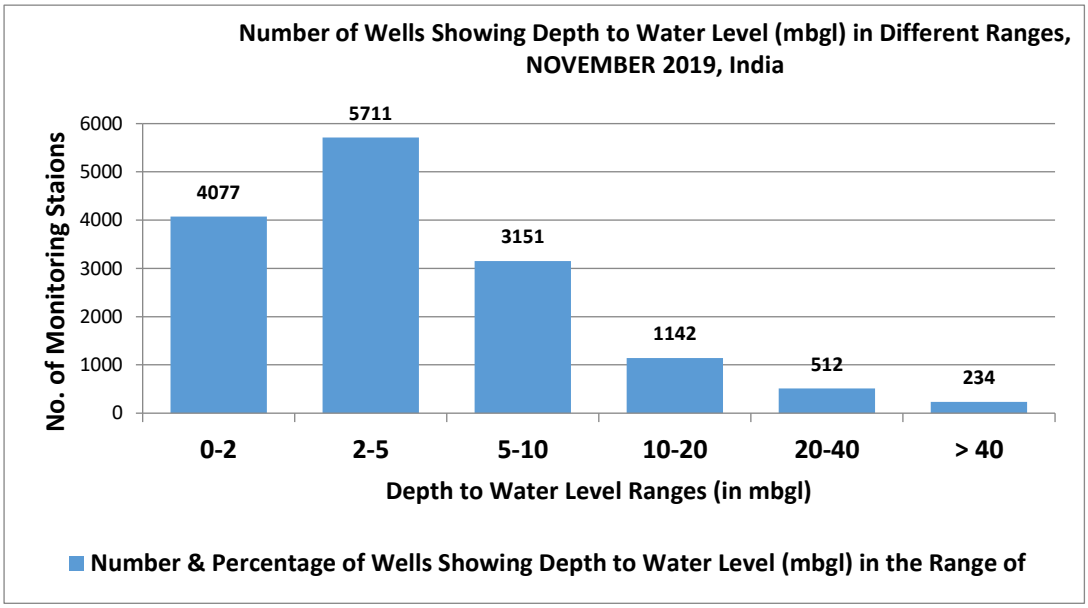
DEPTH TO WATER LEVEL – AUGUST 2019

The ground water level data for August 2019 indicates that out of the total 14550 wells analysed, 4592 (32 %) wells are showing water level less than 2 m bgl (metres below ground level), 4307 (30%) wells are showing water level in the depth range of 2-5 m bgl, 3154 (22 %) wells are showing water level in the depth range of 5-10 m bgl, 1641 (11%) wells are showing water level in the depth range of 10-20 m bgl, 599 (4%) wells are showing water level in the depth range of 20-40 m bgl and the remaining 257 (2%) wells are showing water level more than 40 m bgl,**.** The maximum depth to water level of 115.00 m bgl is observed in Rajasthan whereas the minimum is less than 1 m bgl. Ground water level data of August 2019 for the country reveals that the general depth to water level of the country ranges from 0 to 5 m bgl. Almost 62 % of the wells analysed show water level in the range of 0- 5 m bgl. Very shallow water level of less than 2 m bgl (32 %) is observed in almost all the states, such as except Chandigarh, Daman & Diu, Punjab, and Tamil Nadu. All the other states/UTs have more or less considerable percentage of wells showing water level of less than 2 m bgl. Almost 30% of the wells analysed show water level in the range of 2 – 5 m bgl, especially in the states of Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh and the western coastal plains. In major parts of north-western and western states, depth to water level is generally deeper and ranges from about 10- 40 m bgl. In parts Delhi, Haryana and Rajasthan, water level of more than 40 m bgl is also recorded. The peninsular part of country recorded a water level in the range of 2 to 20 m bgl. The maximum depth to water level of 115.00 m bgl is observed in Nagaur district of Rajasthan whereas the minimum is less than 1 m bgl. **(Plate V, Annexure II).**



Depth to Water Level – Post Monsoon 2019

The ground water level data for November 2019 indicates that out of the total 14827 wells analysed, 4077 (28 %) wells are showing water level less than 2 m bgl (metres below ground level), 5711(38%) wells are showing water level in the depth range of 2-5 m bgl, 3151 (21%) wells are showing water level in the depth range of 5-10 m bgl, 1142 (8%) wells are showing water level in the depth range of 10-20 m bgl, 512 (3%) wells are showing water level in the depth range of 20-40 m bgl and the remaining 234 (2%) wells are showing water level more than 40 m bgl. **(Plate VI, Annexure III).** Perusal of depth to water level data of November 2019 indicates that in general depth to water level ranges from 2 to 5 m bgl as observed at about 66% of the monitoring stations. Very shallow water level of less than 2 m bgl is observed in few states, such as Assam, Odisha, Andhra Pradesh, Bihar, Maharashtra, Gujarat and Eastern Uttar Pradesh, in small patches. Eastern, Central and also Western part of the country, covering the states of Assan, Bihar, Jharkhand, Odisha, Chhattisgarh, Andhra Pradesh, Maharashtra and Eastern UP shows water level in the range of 2-5 m bgl. In major parts of north-western and western states, depth to water level is generally deeper and ranges from about 10- 40 m bgl. In parts Delhi, Haryana and Rajasthan, water level of more than 40 m bgl is also recorded. The peninsular part of country recorded a water level in the range of 2 to 10 m bgl. The maximum depth to water level of 121.00 m bgl is observed in Bikaner district of Rajasthan whereas the minimum is less than 1 m bgl. **(Plate VI, Annexure III)**



Depth to Water Level – January 2020

The ground water level data for January 2020 indicates that out of the total 14649 wells analysed, 2009 (14%) wells are showing water level less than 2 m bgl (metres below ground level), 5881 (40%) wells are showing water level in the depth range of 2-5 m bgl, 4405 (30 %) wells are showing water level in the depth range of 5-10 m bgl, 1595 (11%) wells are showing water level in the depth range of 10-20 m bgl, 513 (3%) wells are showing water level in the depth range of 20-40 m bgl and the remaining 246 (2 %) wells are showing water level more than 40 m bgl. The maximum depth to water level of 121.60 m bgl is observed in Rajasthan whereas the minimum is less than 1 m bgl. **(Plate VII, Annexure IV).** The depth to water level map of January 2020 for the country indicates that in general depth to water level ranges from 2 to 10 m bgl as observed at about 70% of the monitoring stations. Shallow water level of less than 2 m bgl is observed in very small and isolated pockets in the states of Assam, Odisha, Andhra Pradesh and Maharashtra. Water level in the range of 5 to 10 m bgl is prominent in all the states of Central and Southern India. In West Bengal water level generally varies from 2 to 5 m bgl and central parts of the state shows water level of 10 m and above. In major parts of north-western states depth to water level generally ranges from 10-40 m bgl. Water level of more than 40 m bgl is also prevalent in the north western part of the country. In some parts of Haryana, and Delhi and almost major parts of Rajasthan, water level of more than 40 m bgl is recorded.

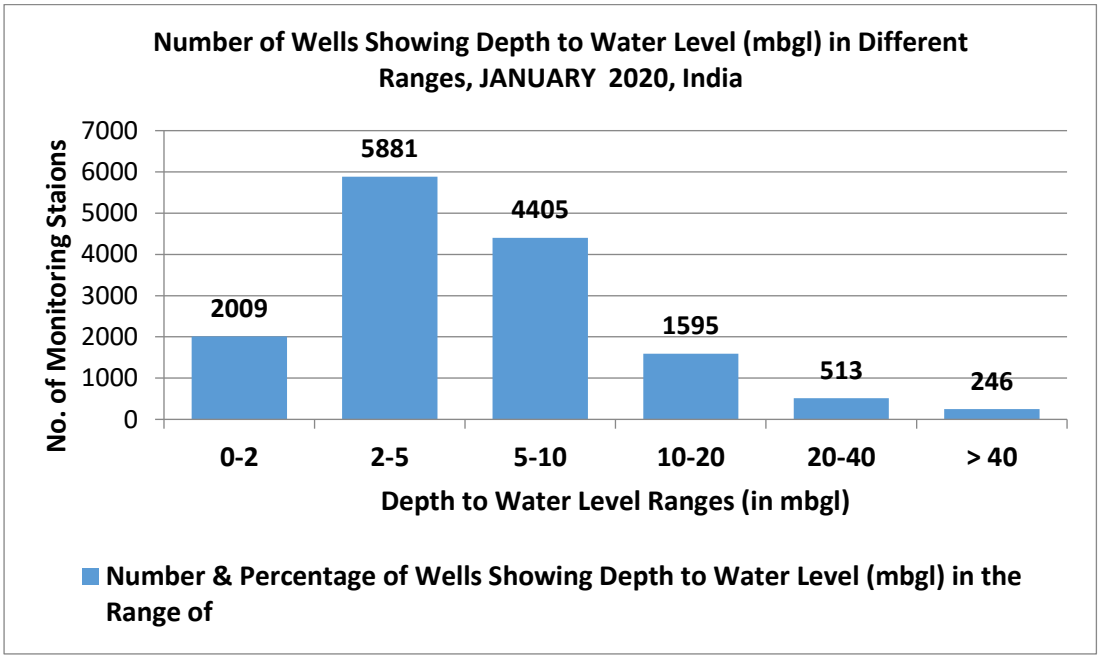
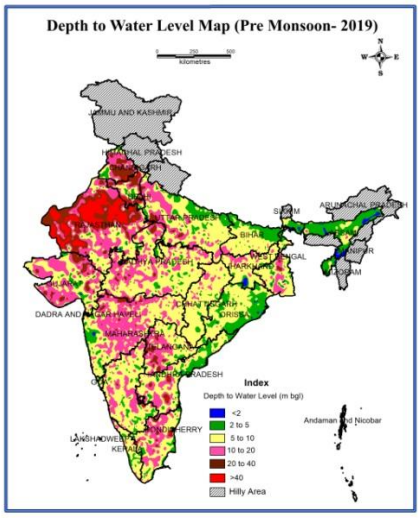
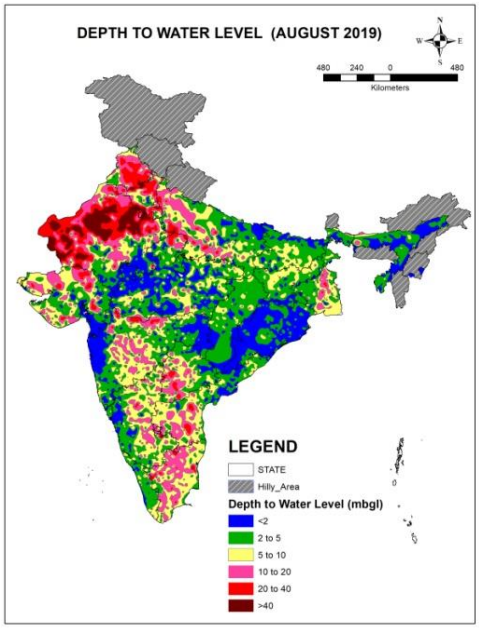
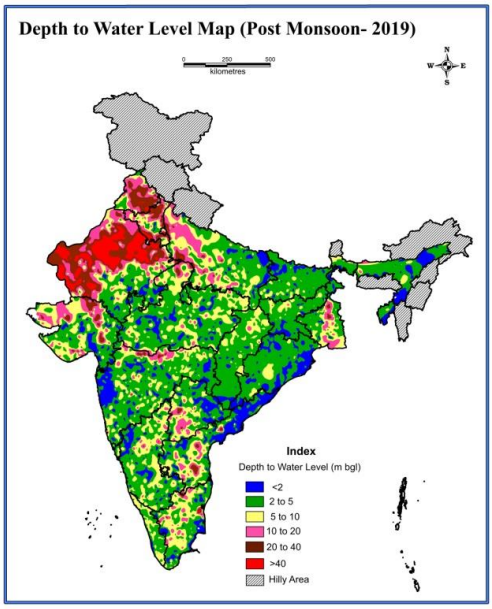


PLATE – III

DEPTH TO WATER LEVEL AT A GLANCE







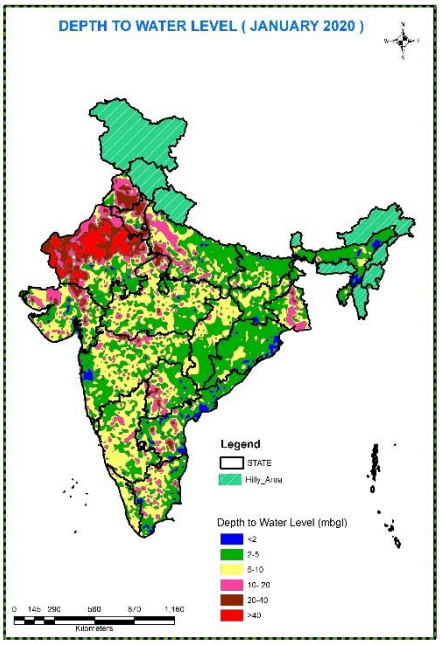


PLATE - IV

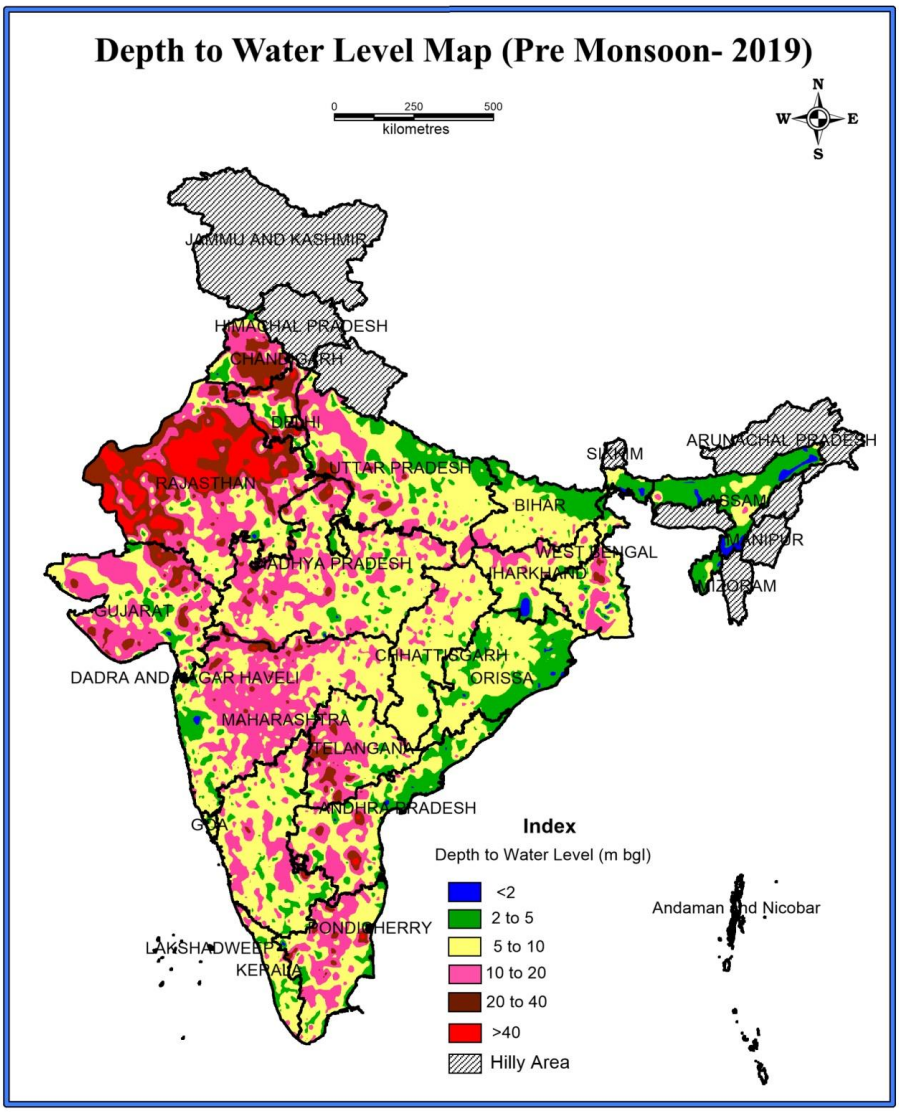

Depth to Water Level Map (Pre Monsoon- 2019)
0 250 500
kilometres
N
W E
S
JAMMU AND KASHMIR
HIMACHAL PRADESH
CHANDIGARH
DELHI
UTTAR PRADESH
RAJASTHAN
BIHAR
SIKKIM
ARUNACHAL PRADESH
ASSAM
MANIPUR
MIZORAM
WEST BENGAL
JHARKHAND
MADHYA PRADESH
GUJARAT
CHHATTISGARH
ORISSA
DADRA AND NAGAR HAVELI
MAHARASHTRA
TELANGANA
ANDHRA PRADESH
GOA
PONDICHERRY
LAKSHADWEEP
KERALA
Andaman and Nicobar
Index
Depth to Water Level (m bgl)
<2
2 to 5
5 to 10
10 to 20
20 to 40
>40
Hilly Area

PLATE - V

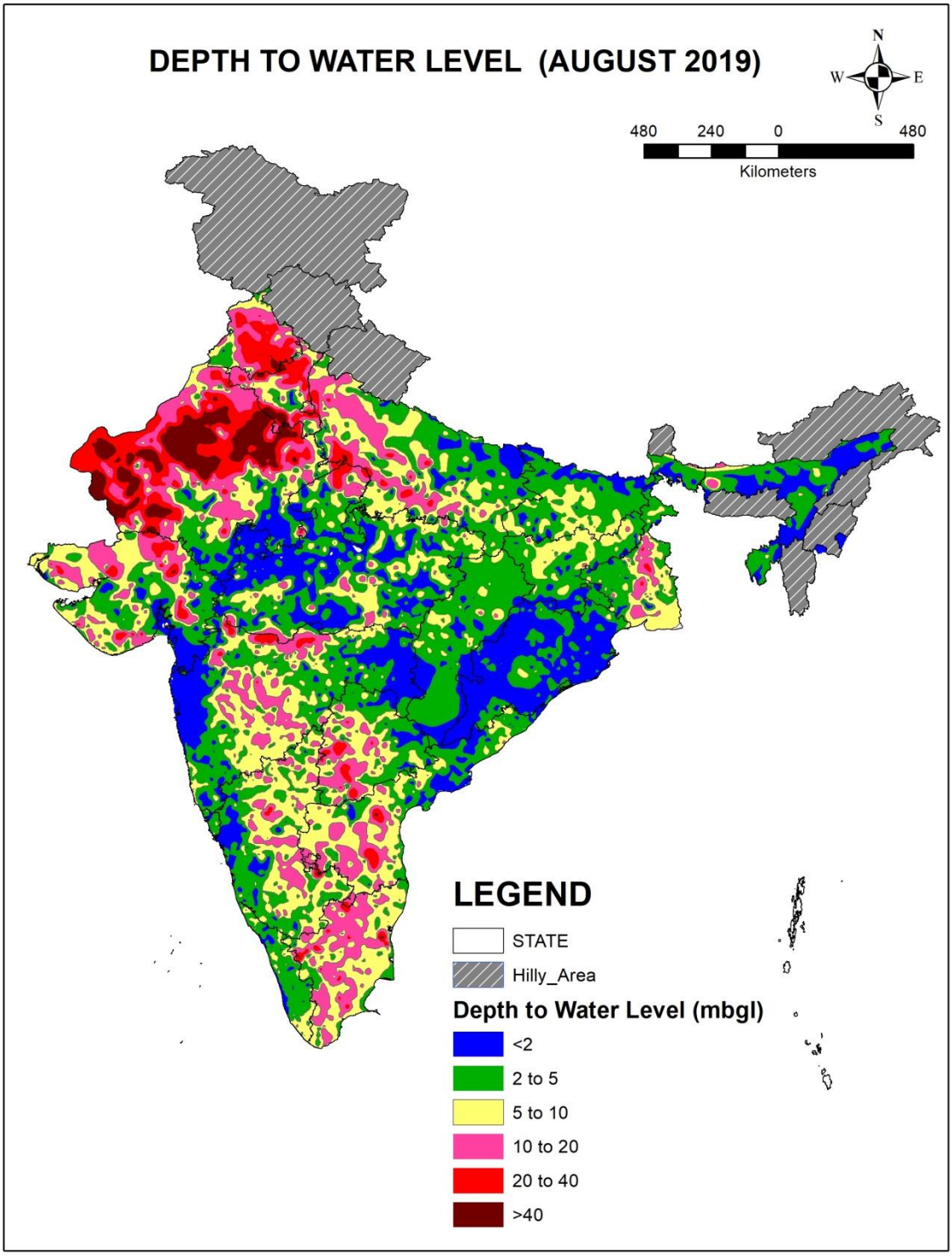
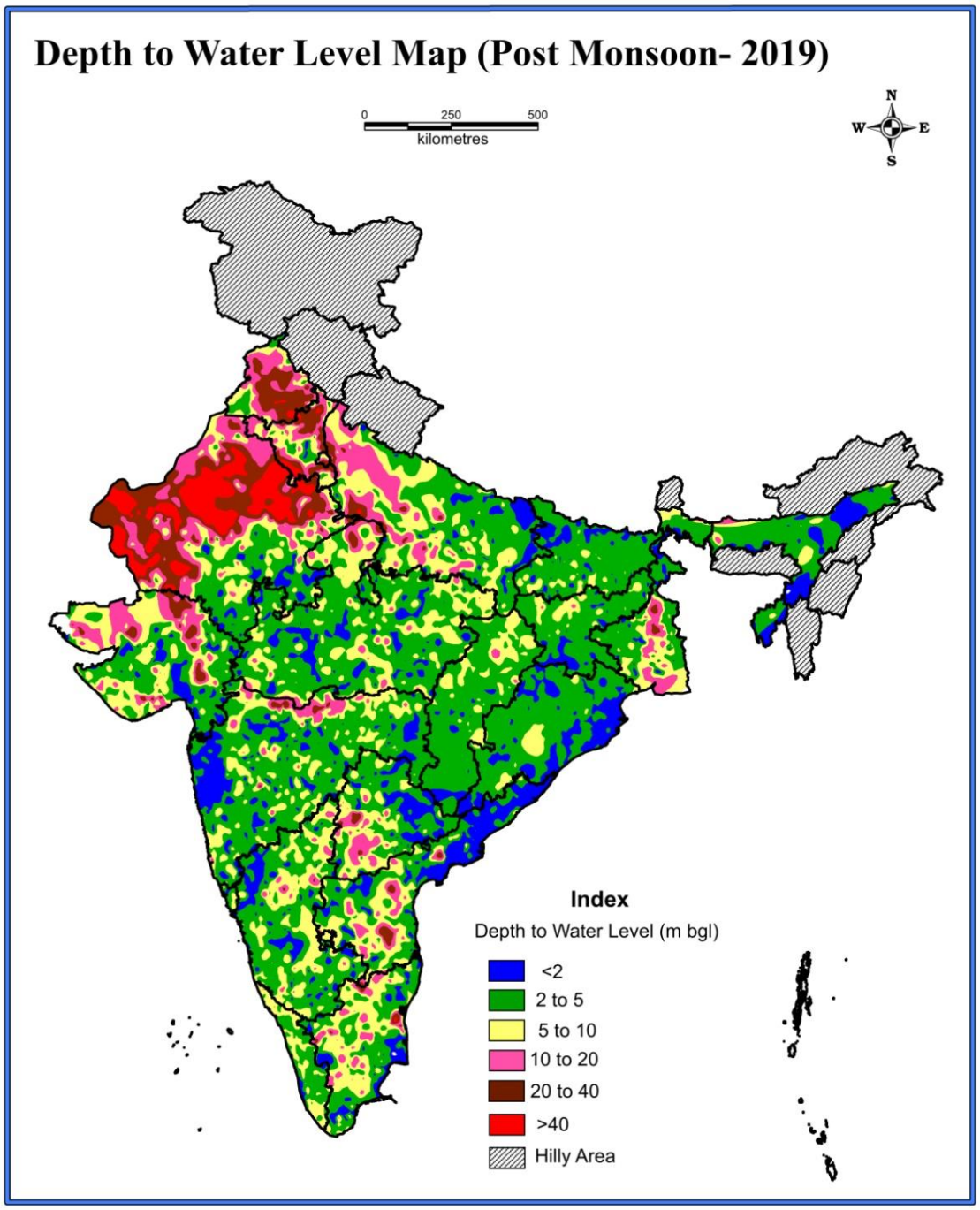
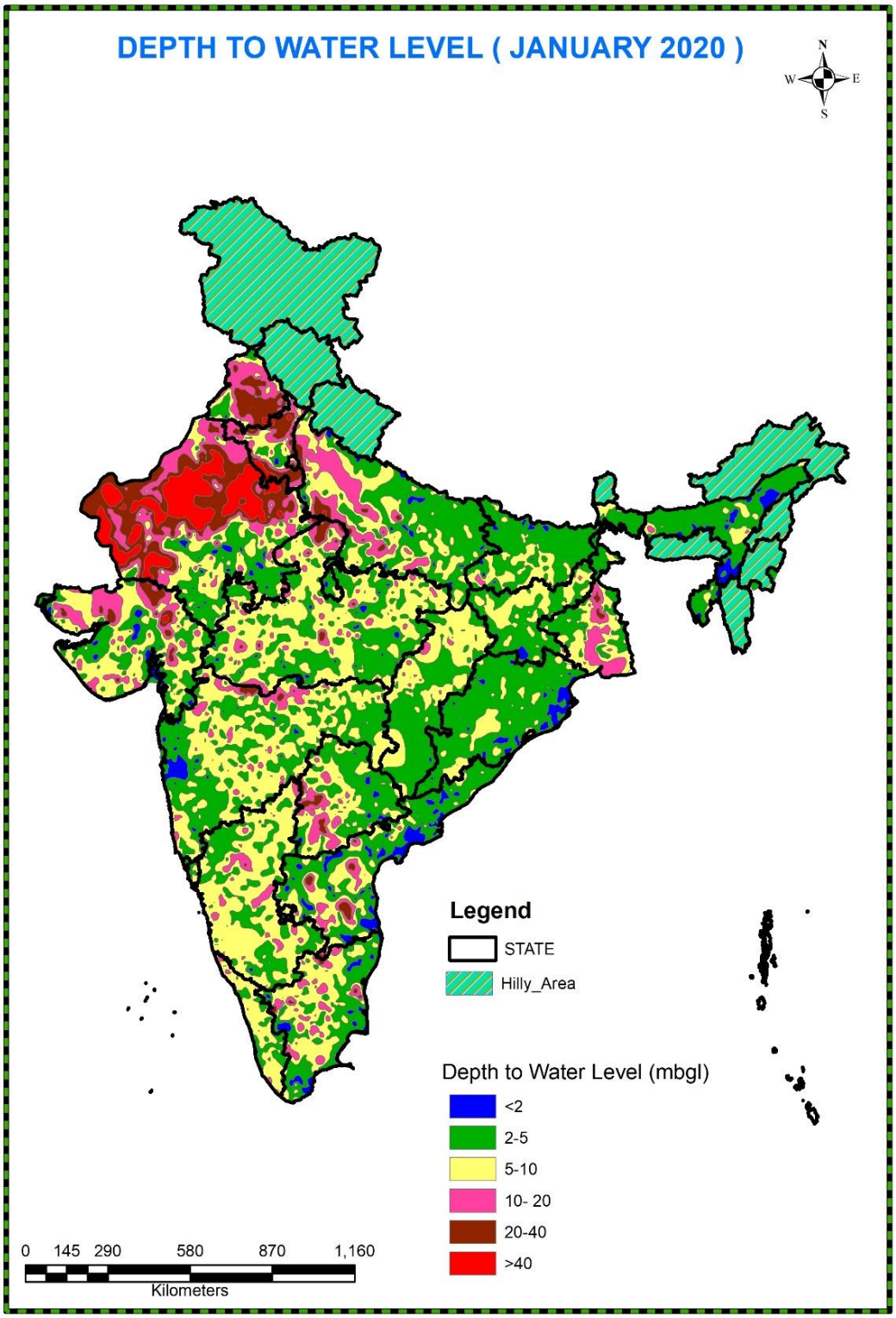

DEPTH TO WATER LEVEL (AUGUST 2019)
N
W
E
S
480 240 0 480
Kilometers
LEGEND
STATE
Hilly_Area
Depth to Water Level (mbgl)
<2
2 to 5
5 to 10
10 to 20
20 to 40
>40

PLATE VI

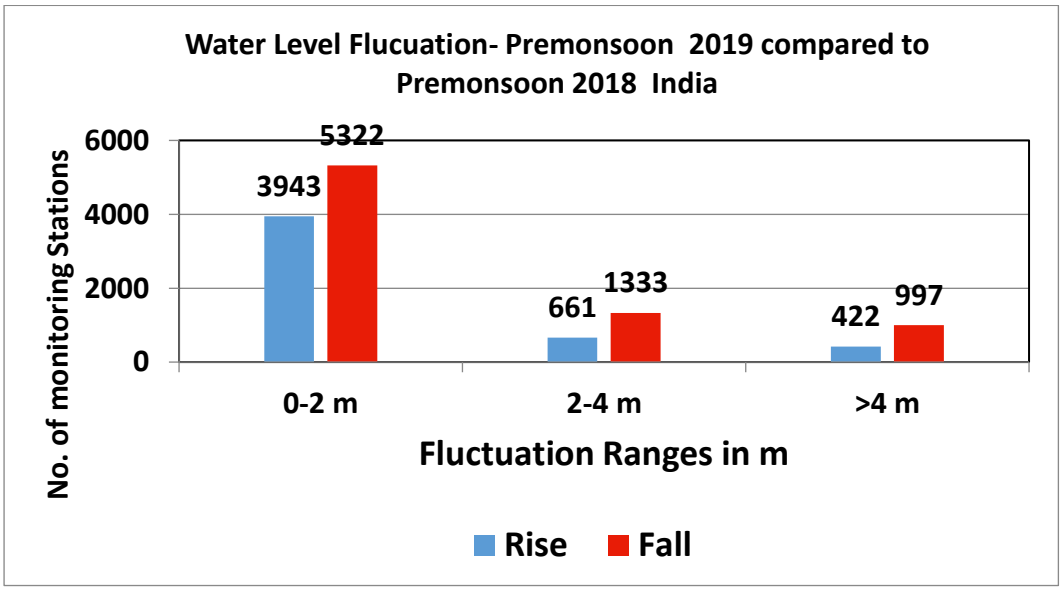

Depth to Water Level Map (Post Monsoon- 2019)
0
250
500
kilometres
N
W
E
S
Index
Depth to Water Level (m bgl)
<2
2 to 5
5 to 10
10 to 20
20 to 40
>40
Hilly Area


DEPTH TO WATER LEVEL (JANUARY 2020)
N
W
E
S
Legend
STATE
Hilly_Area
Depth to Water Level (mbgl)
<2
2-5
5-10
10- 20
20-40
>40
0 145 290 580 870 1,160
Kilometers

2.3 ANNUAL WATER LEVEL FLUCTUATION

ANNUAL WATER LEVEL FLUCTUATION (PREMONSOON 2019 - PREMONSOON 2018)

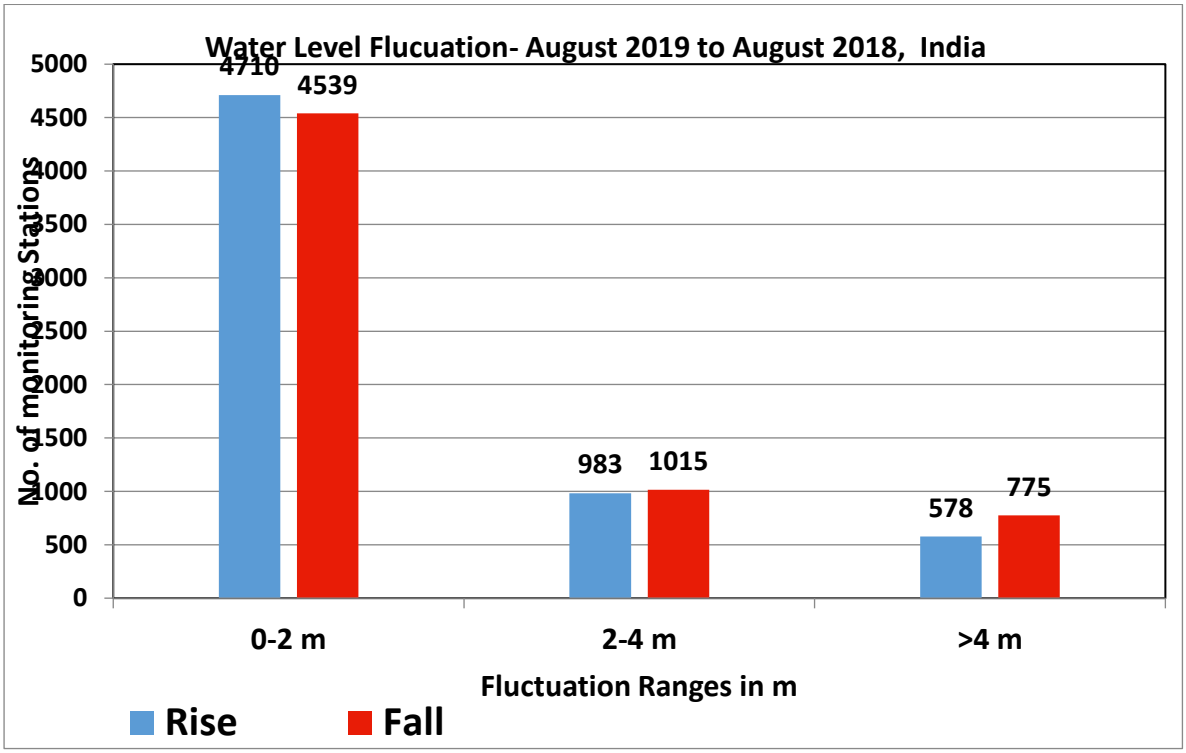
The water level fluctuation of Premonsoon 2019 compared to Premonsoon 2018 shows that out of 13095 wells analysed, 5026 (38%) are showing rise and 7652 (58%) are showing fall in water level. Remaining 417 (3%) stations analysed do not show any change in water level. Both rise and fall are equally predominant in the country. About 30% wells are showing rise in the water level in the range of less than 2 m. About 5% wells are showing rise in water level in 2-4 m range and 3% wells showing rise in water level more than 4 m range. Similarly, 41% wells are showing decline in water level in less than 2 m range. About 10% wells are showing decline in water level in 2-4 m range and 7% wells are showing decline in water level more than 4 m range. Fluctuation is mainly in the range of 0-2 m **(Plate IX, Annexure V)**. A comparison of depth to water level of Premonsoon 2019 to Premonsoon 2018 also reveals that in general there is fall in water level in most part of the country. Fall is mostly in the range of 0-2 m, and observed in the states of Andhra Pradesh, Assam, Bihar, Goa, Gujarat, Jharkhand, Karnataka, Kerala, Maharashtra, Meghalaya, Punjab, Rajasthan, Tamil Nadu, Telangana and Tripura. Fall of more than 4 m is observed in isolated pockets, in the states of Gujarat, Rajasthan, Telangana, and Tamil Nadu. Rise in water level is also observed in the states of Chandigarh, Delhi, Himachal Pradesh, Haryana, Jammu & Kashmir, Madhya Pradesh, Odisha, Punjab, Uttar Pradesh.



ANNUAL WATER LEVEL FLUCTUATION (AUGUST 2019 -AUGUST 2018)

A comparison of depth to water level of August 2019 with August 2018 reveals that in general, there is both rise and fall in water level in the country. Rise and fall is mostly in the range of 0-2 m. Rise in water level has been observed in the states of Karnataka, Madhya Pradesh, Kerala, Gujarat, Rajasthan, Pondicherry & Punjab. **(Plate X, Annexure VI).**

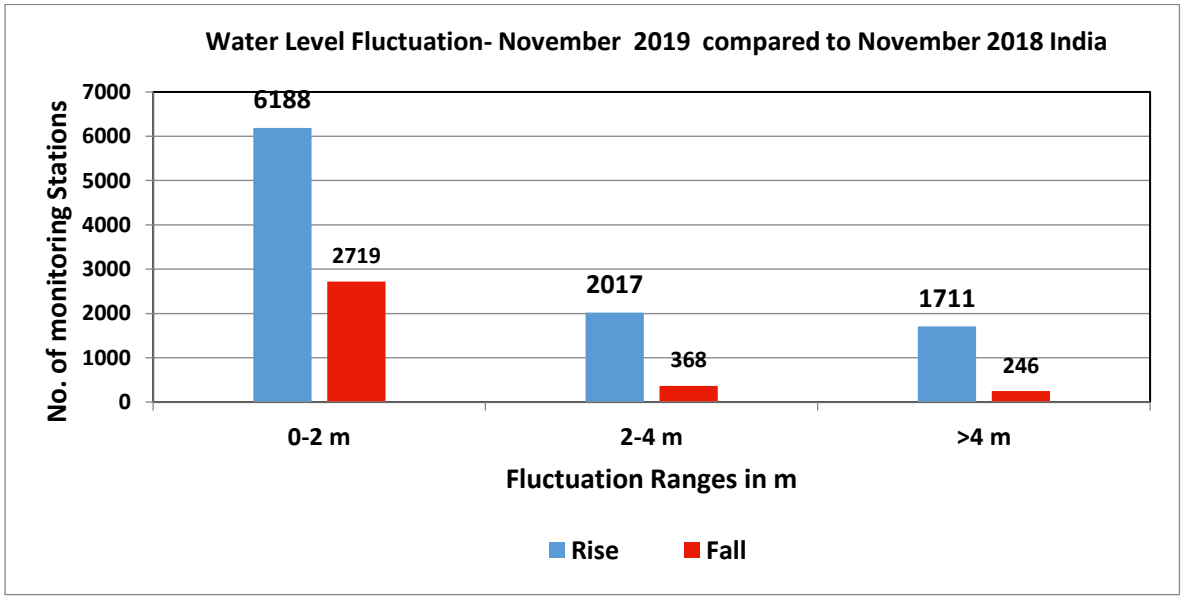
About 49 % (6271) of the wells analysed are showing rise and another 49% (6329) are showing fall in water level. Remaining 2% (294) wells analysed do not show any change in water level. About 37% (4710) wells are showing rise in the water level in the range of less than 2 m. About 8% (983) wells are showing rise in water level in 2-4 m range and 4% (578) wells showing rise in water level more than 4 m range. About 49% wells are showing decline in water level, out of which 35% (4539) wells are showing decline in water level in less than 2 m range. About 8 % (1015) wells are showing decline in water level in 2-4 m range. About 6% (775) wells are showing decline in water level more than 4 m range. Majority of the wells showing rise/decline falls in the range of 0-2 m.



ANNUAL WATER LEVEL FLUCTUATION (NOVEMBER 2019-NOVEMBER 2018)

The water level fluctuation of **November 2019** compared to **November 2018** shows that out of 13410 wells analysed, 9916 (74%) are showing rise and 3333 (25%) are showing fall in water level. Remaining 161 (1%) stations analysed do not show any change in water level. About 46% wells (6188) are showing rise in the water level in the range of less than 2 m. About 15% wells (2017) are showing rise in water level in 2-4 m range and 13% wells (1711) showing rise in water level more than 4 m range. About 25% wells are showing decline in water level, out of which 20% wells (2719) are showing decline in water level in less than 2 m range. Majority of the wells showing rise/decline falls in the range of 0-2 m. **(Plate XI, Annexure VII)**

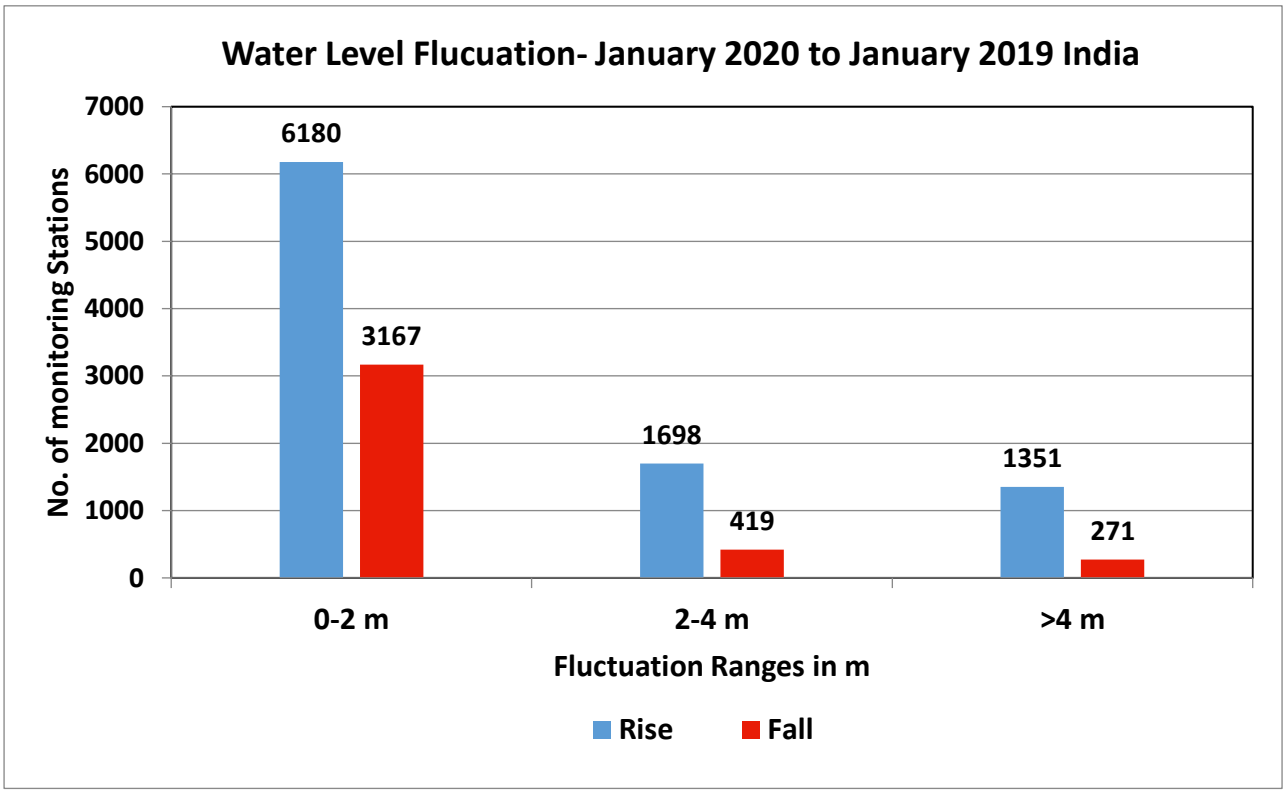
A comparison of depth to water level of November 2019 compared to November 2018 is presented in the form of water level fluctuation map reveals that in general, there is fall in water level in the country. Fall in water level is dominantly seen in all the states/UTs except in the states of Chandigarh, Himachal Pradesh, Tamil Nadu, Uttar Pradesh, Uttarakhand. Decline is mostly in the range of 0-2 m, although decline in the range of more than 2 m is also prevalent in all the states in small patches.



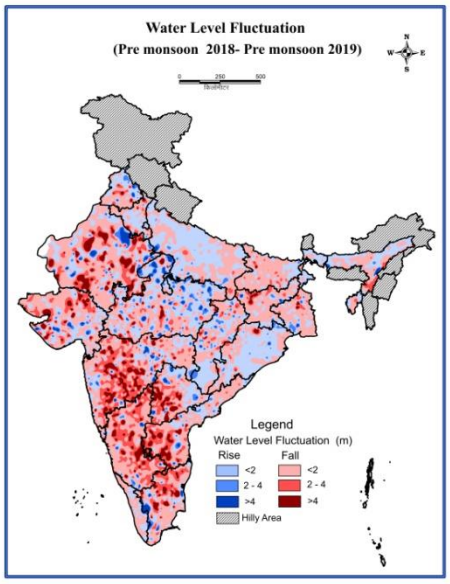
ANNUAL WATER LEVEL FLUCTUATION (JANUARY 2020- JANUARY 2019)

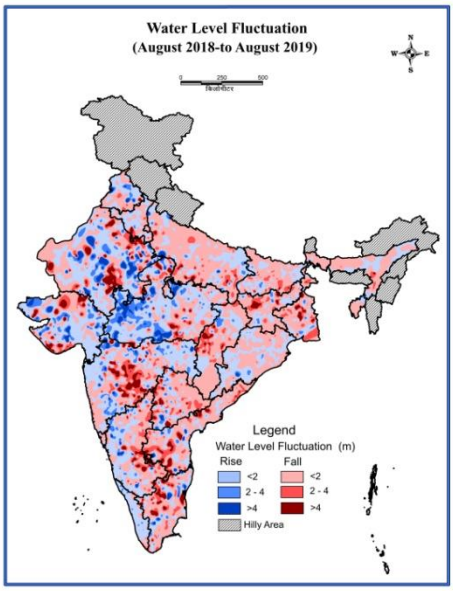
The water level fluctuation of **January 2020 to January 2019** shows that out of 13295 wells analysed, 9229 (69%) are showing rise and 3857 (29%) are showing fall in water level. Remaining 209 (2%) stations analysed do not show any change in water level. About 46% (6180) wells are showing rise in the water level in the range of less than 2 m. About 13% (1698) wells are showing rise in water level in 2-4 m range and 10% (1351) wells showing rise in water level more than 4 m range. About 29% wells are showing decline in water level, out of which 24% (3167) wells are showing decline in water level in less than 2 m range. About 3 % (419) wells are showing decline in water level in 2-4 m range and 2% (271) wells are showing decline in water level more than 4 m range. Majority of the wells showing rise/decline falls in the range of 0-2 m. **(Plate XII, Annexure VIII)**

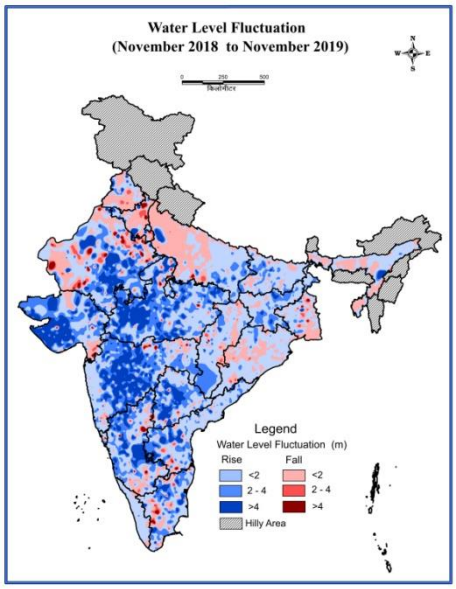
Rise in water level is observed mainly in the southern states of Kerala, Tamil Nadu, Karnataka, Andhra Pradesh and also in Assam, Odisha, Gujarat and Rajasthan. Fall is mostly in the range of 0-2 m, although fall in the range of more than 2 m is also prevalent in all the states in small patches.

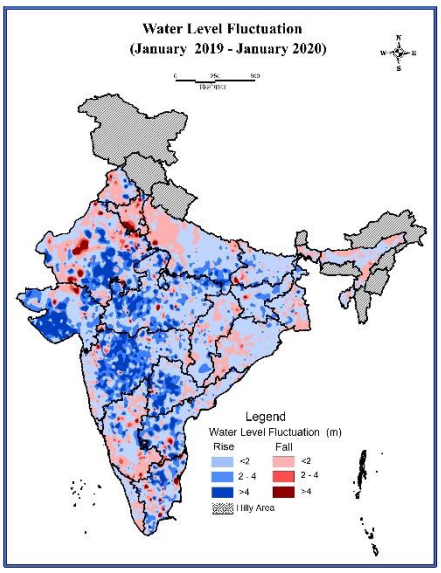


ANNUAL WATER LEVEL FLUCTUATION AT A GLANCE









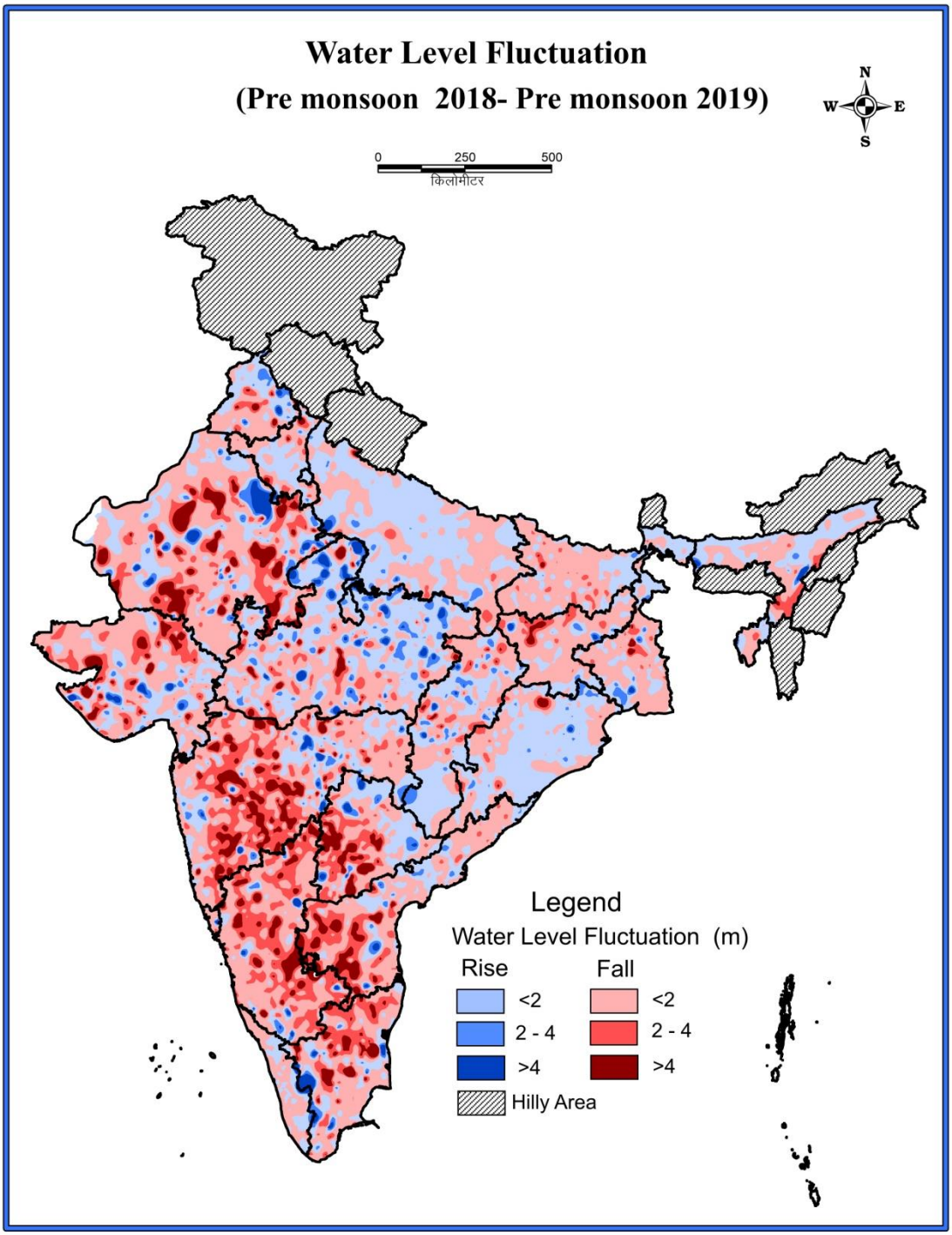

Water Level Fluctuation
(Pre monsoon 2018- Pre monsoon 2019)
N
W
E
S
0
250
500
किलोमीटर
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area

PLATE - X

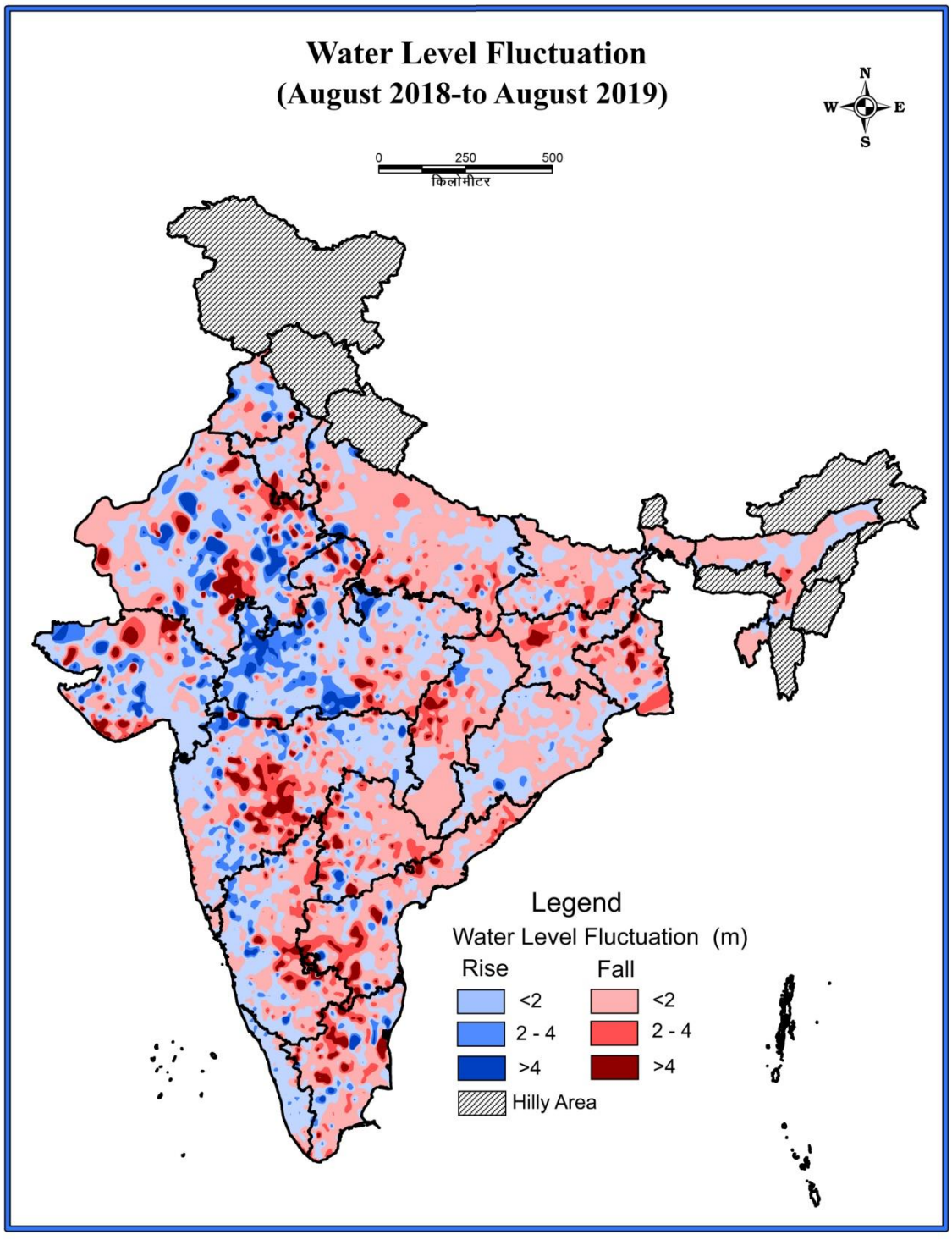
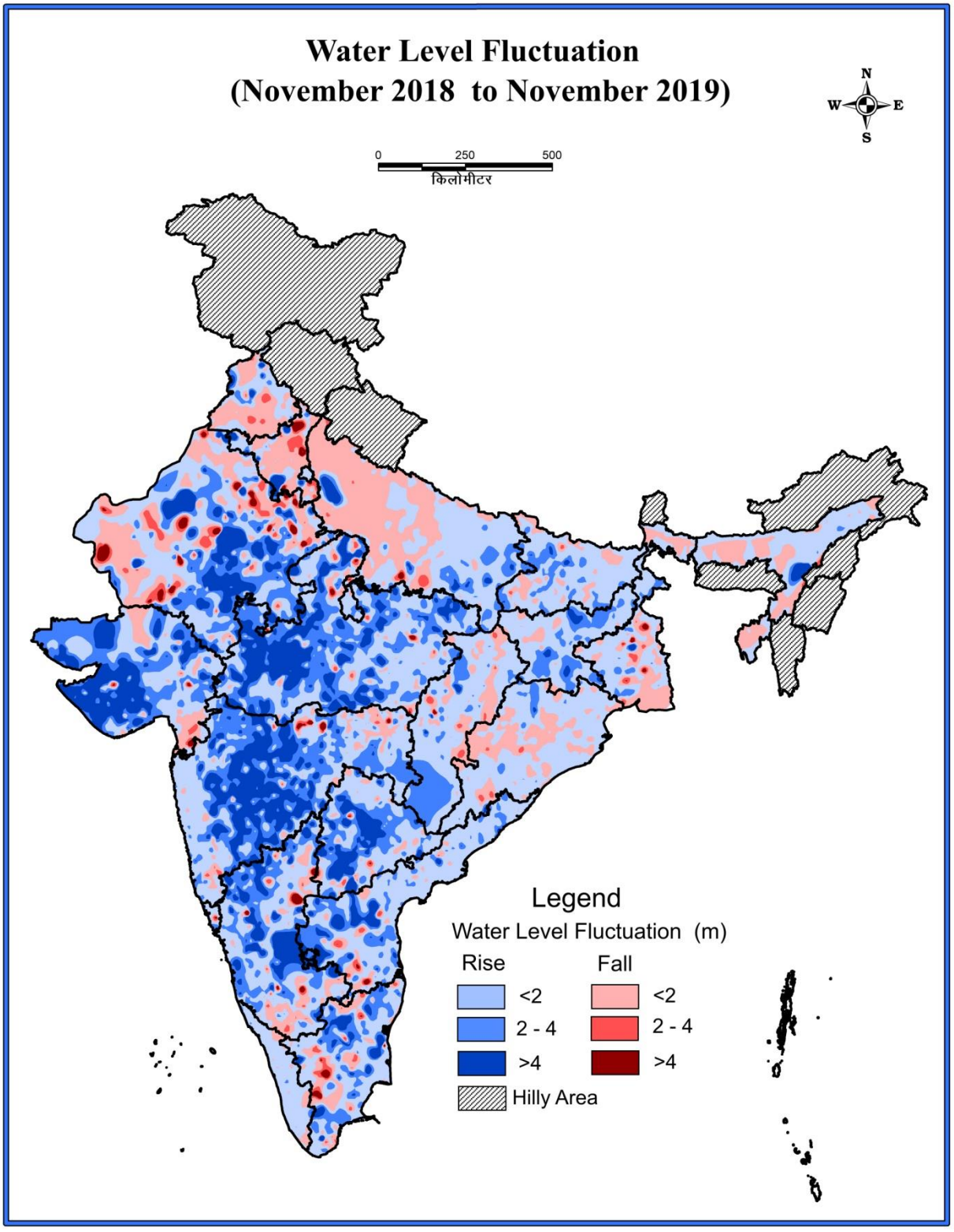
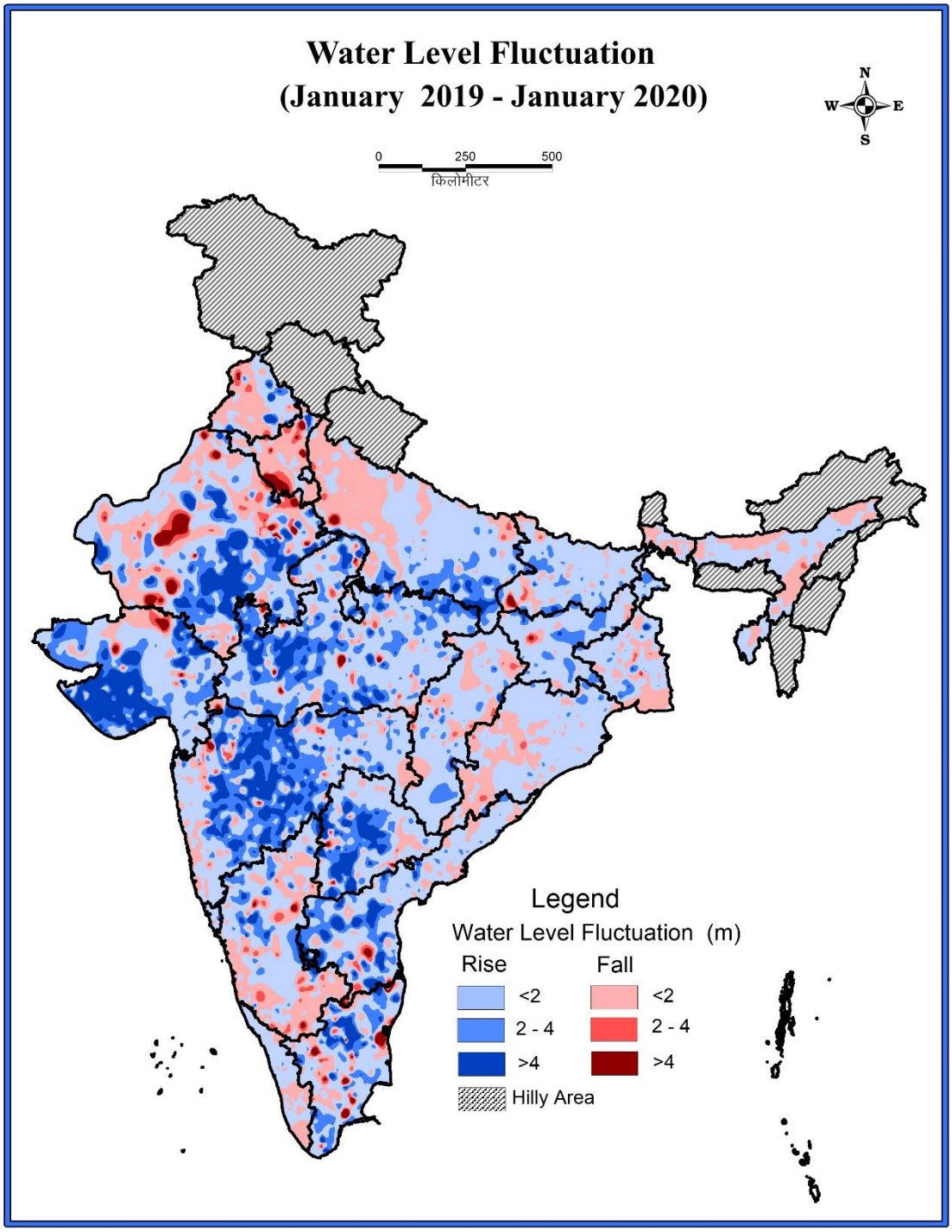

Water Level Fluctuation
(August 2018-to August 2019)
N
W
E
S
0
250
500
किलोमीटर
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area

PLATE – XI

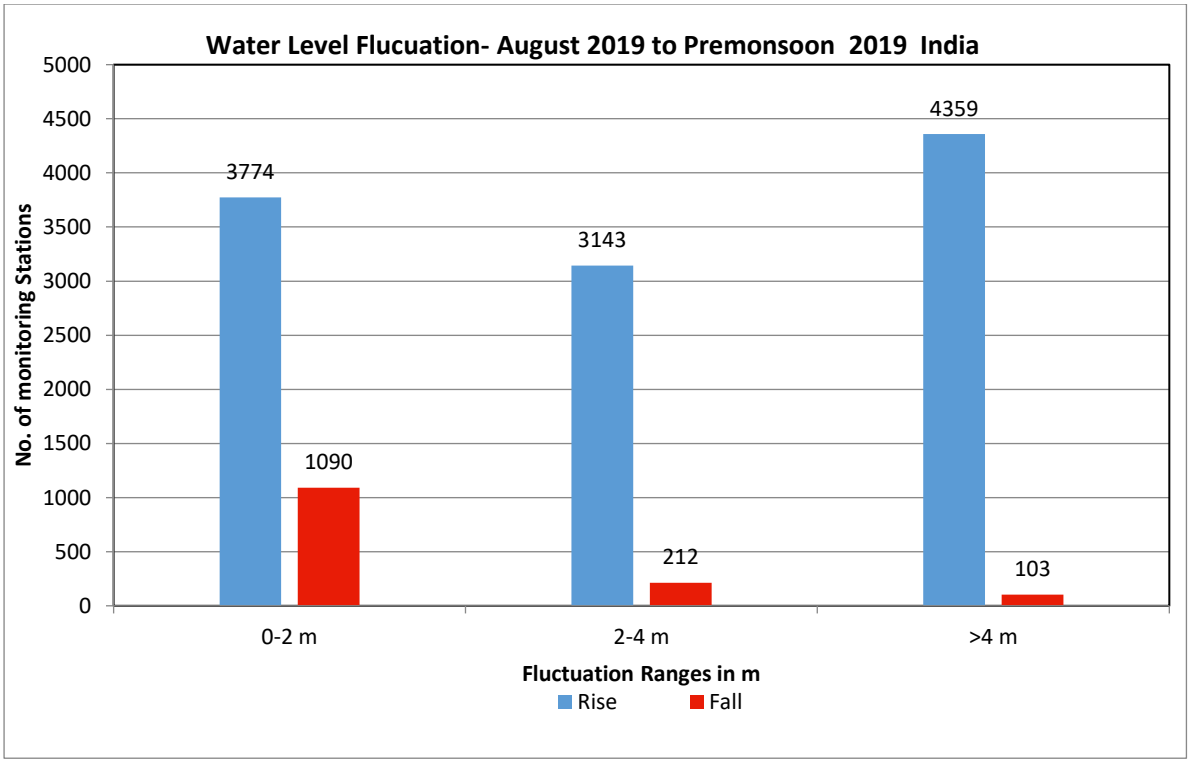

Water Level Fluctuation
(November 2018 to November 2019)
N
W
E
S
0
250
500
किलोमीटर
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area


Water Level Fluctuation
(January 2019 - January 2020)
N
W
E
S
0
250
500
किलोमीटर
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area

2.4 SEASONAL WATER LEVEL FLUCTUATION

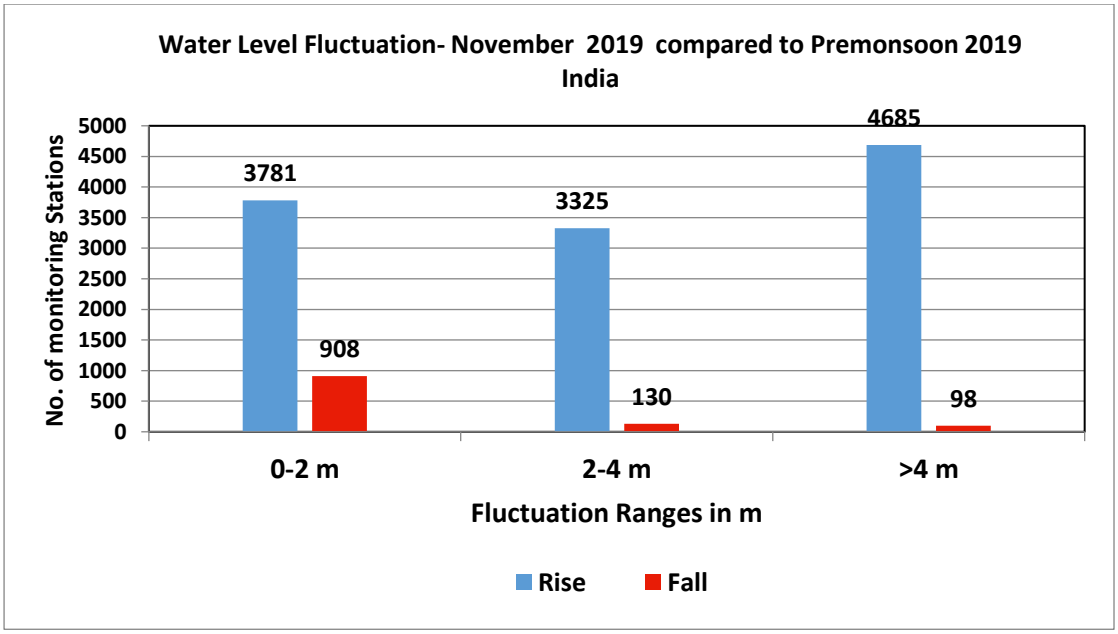
SEASONAL WATER LEVEL FLUCTUATION (AUGUST 2019-PREMONSOON 2019)

A comparison of depth to water level of August 2019 with Premonsoon 2019 indicates that about 87 % (11276) of wells are showing rise in water levels, out of which 29% (3774) wells are showing rise of less than 2 m range. About 24% (3143) wells are showing rise in water level in the range of 2-4 m and another 34 % (4359) wells are showing rise in water in range of more than 4 m. Only 11 % (1405) wells are showing decline in water level, out of which 8% (1090) wells are showing decline in water in the range of 0-2 m. Rise in water level more than 4 m is mostly prominent all over the country covering in all the states, except Assam, Punjab, Haryana, Jharkhand, Tamil Nadu, Tripura and Meghalaya **(Annexure IX).**



SEASONAL WATER LEVEL FLUCTUATION (NOVEMBER 2019-PREMONSOON 2019)

A comparison of depth to water level of November 2019 with Premonsoon 2019 indicates that about 91% of wells (11791) analysed are showing rise in water levels, out of which 29% (3781) wells are showing rise of less than 2 m range. About 26 % (3325) wells are showing rise in water level in the range of 2-4 m and another 36 % (4685) wells are showing rise in water in range of more than 4 m. Only 9% wells are showing decline in water level, out of which 7 % wells (908) are showing decline in water in the range of 0-2 m. Rise in water level is prominent in all the states of the country Rise in water level of more than 4 m is prominent in the most of the states such as Chhatishgarh, Dadra & Nagar Haveli, Daman & Diu, Gujarat, Himachal Pradesh Jharkhand, Karnataka,, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana , Uttarakhand, Uttar Pradesh. **(Plate XIV, Annexure X)**



SEASONAL WATER LEVEL FLUCTUATION (JANUARY 2020 TO PREMONSOON 2019)

The water level fluctuation of **January 2020 to Premonsoon 2019** indicates that out of 12822 wells analysed, 10980 (86%) are showing rise and 1652 (13%) are showing fall in water level. Remaining 190 (1%) wells analysed do not show any change in water level. About 38% (4853) wells are showing rise in the water level in the range of less than 2 m. About 24% (3056) wells are showing rise in water level in 2-4 m range and another 24% (3071) wells showing rise in water level more than 4 m range. About 13% (1652) wells are showing decline in water level, out of which 11% (1326) wells are showing decline in water level in less than 2 m range. Majority of the wells showing rise/decline falls in the range of 0-2 m. **(Plate XV, Annexure XI)**

A comparison of depth to water level of January 2020 with Premonsoon 2019 reveals that in general, there is rise in water level in almost the entire country, except in few states. Rise in water level is prominent in all the states of the country. Rise in water level is prominent in the range of 0-2 m.

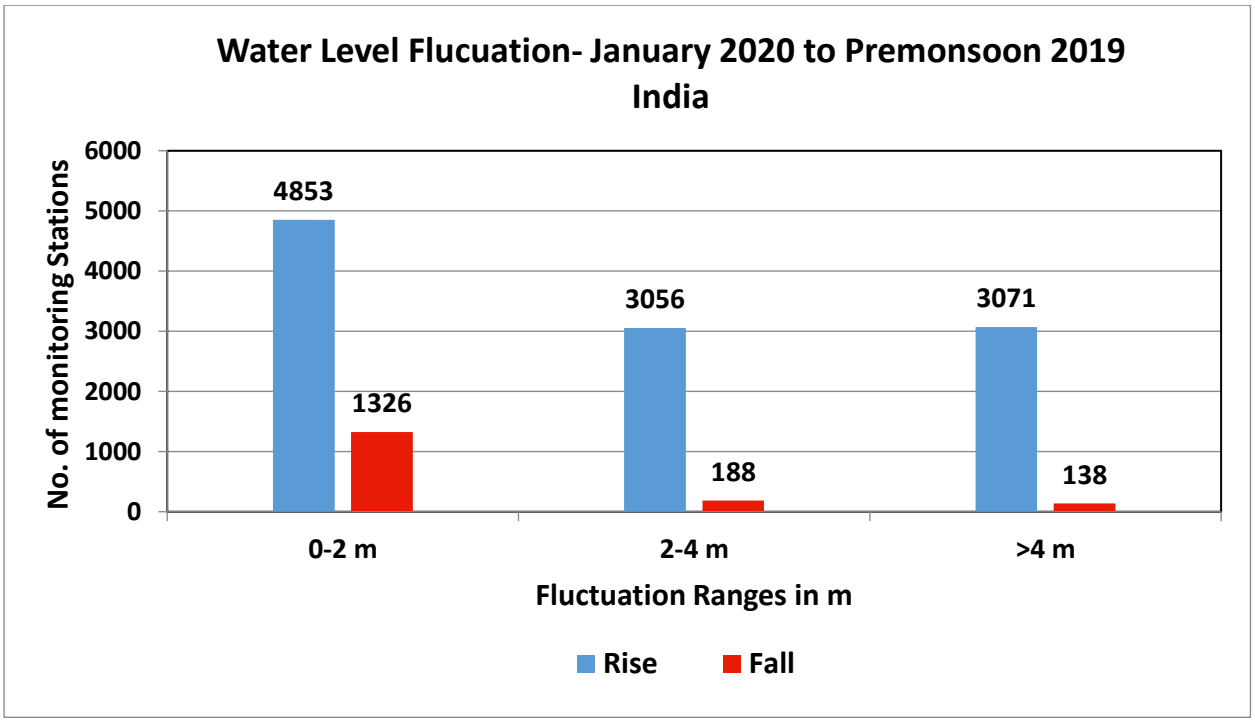
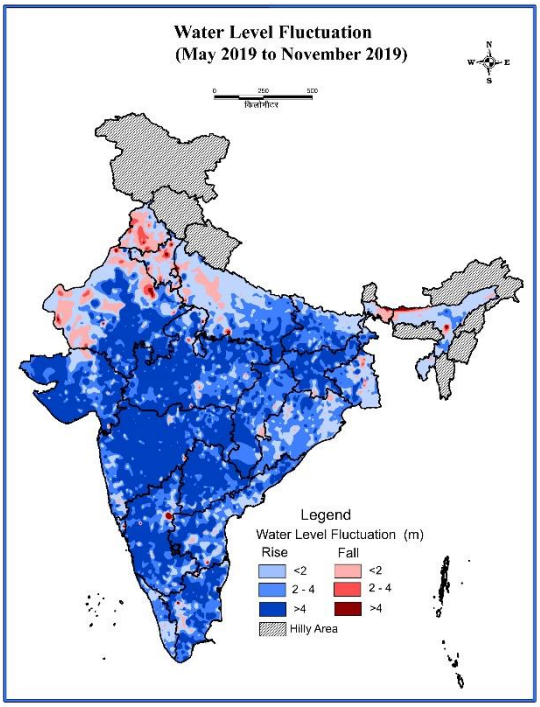


PLATE - XIII

SEASONAL WATER LEVEL FLUCTUATION AT A GLANCE



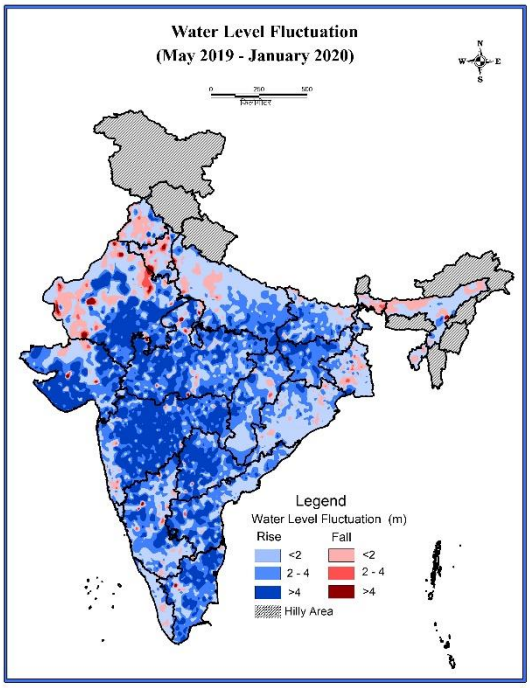


PLATE – XIV

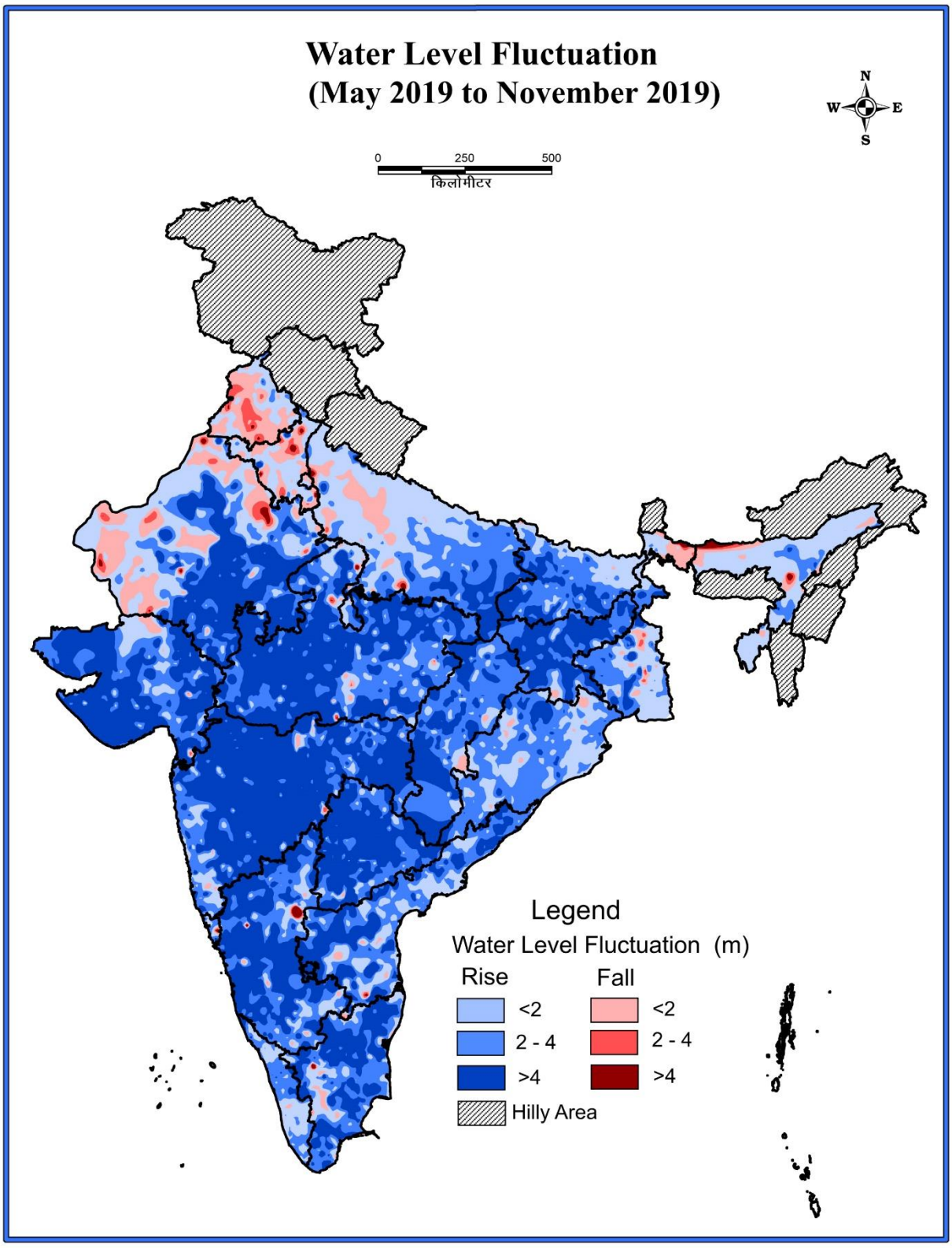
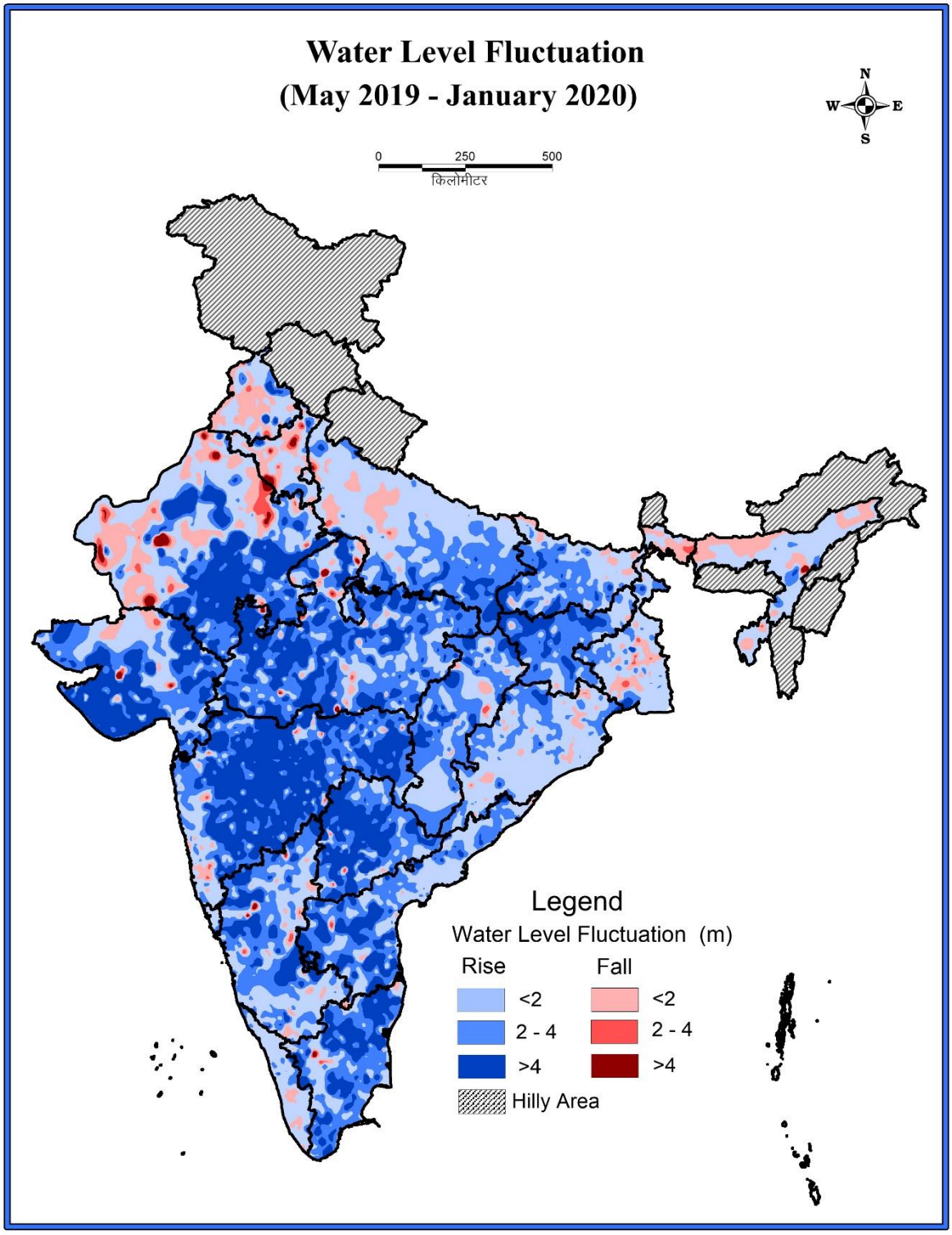

Water Level Fluctuation
(May 2019 to November 2019)
N
W
E
S
0
250
500
किलोमीटर
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area

PLATE – XV

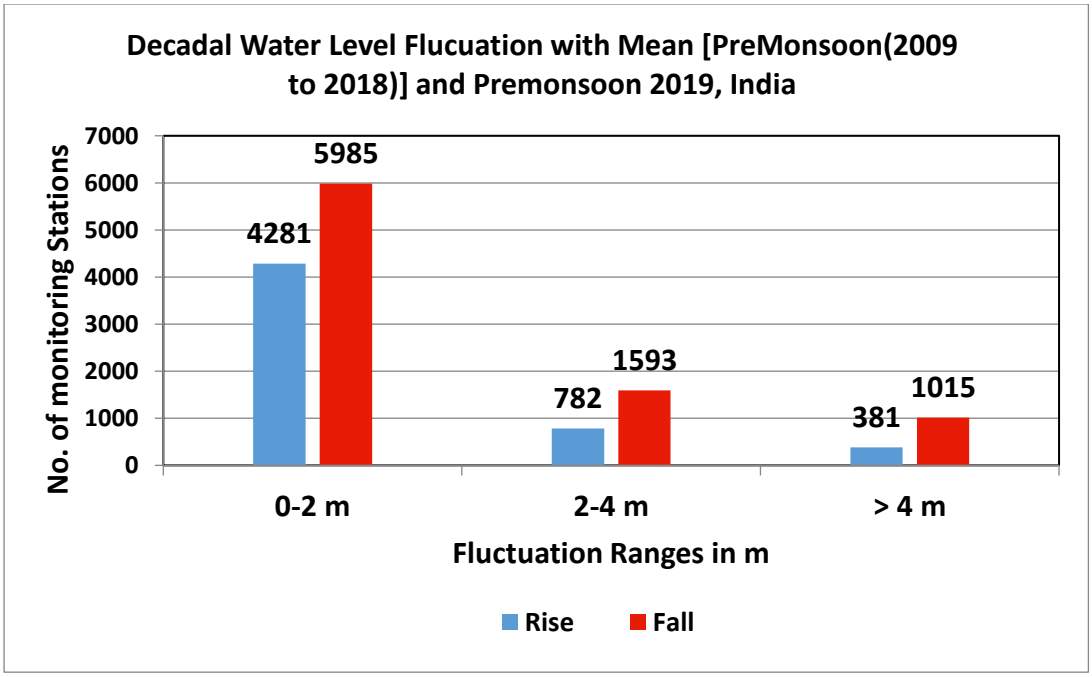

Water Level Fluctuation
(May 2019 - January 2020)
N
W
E
S
0
250
500
किलोमीटर
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area

2.5 DECADAL WATER LEVEL FLUCTUATION

WATER LEVEL FLUCTUATION WITH DECADAL MEAN (PREMONSOON-2009 TO PREMONSOON-2018) TO PREMONSOON-2019

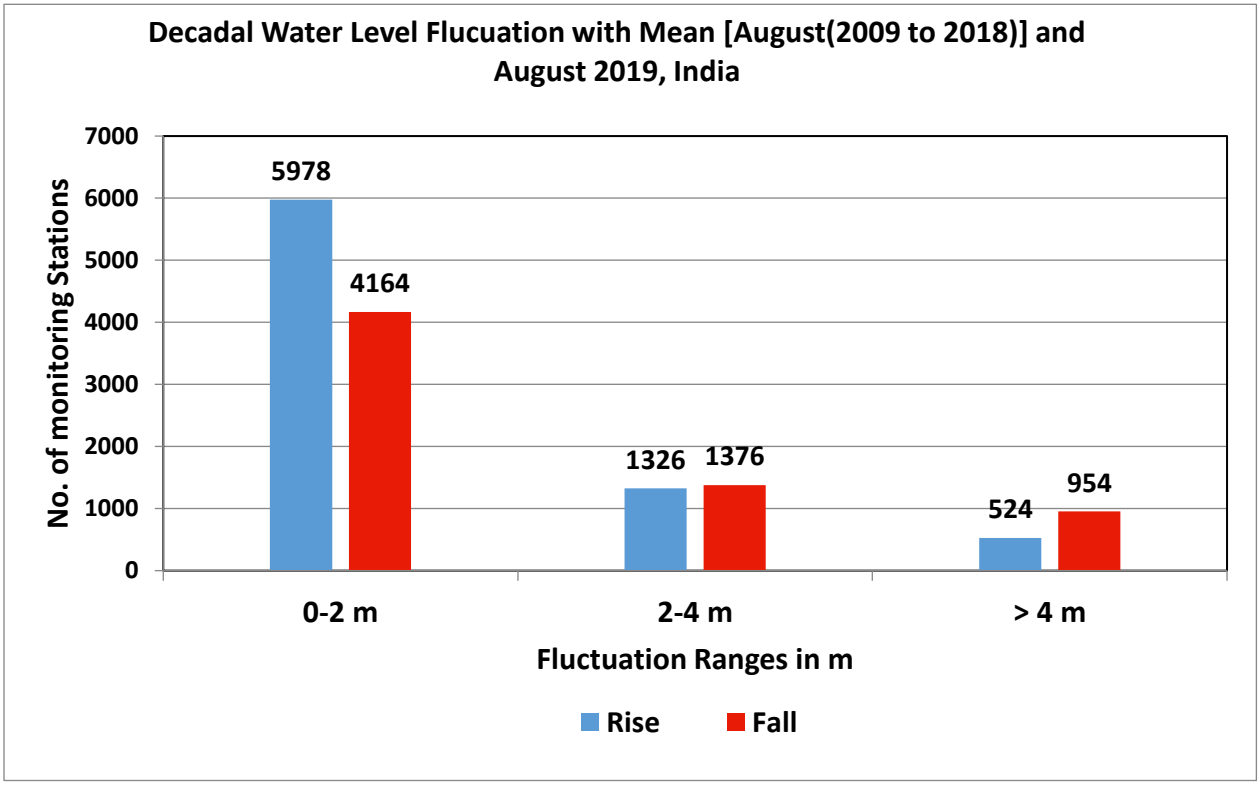
A comparison of depth to water level of Premonsoon 2019 with decadal mean of Premonsoon (2009-2018) indicate that 5437 (38%) of wells are showing rise in water level, out of which 30% (4281) wells are showing rise of less than 2 m . About 5% (782) wells are showing rise in water level in the range of 2-4 m and about 3% wells are showing rise in water level in the range of more than 4 m. 8717 (61%) wells are showing decline in water level, out of which 42% wells are showing decline in water in the range of 0-2 m. 12% wells are showing decline in water level in 2-4 m range and remaining 7% are in the range of more than 4 m. A comparison of depth to water level of Premonsoon 2019 with decadal mean of Premonsoon (2009-2018) indicates that 61% of the analysed wells show decline in water level whereas 38% wells show rise in water level. 1% well show no change. Rise and decline in water level is primarily in the 0-2 m range. More than **50%** of the wells analysed have registered decline in ground water level , mostly in the range of 0-2 m, in all the states/UTs except few states such as Daman & Diu, Himachal Pradesh, Meghalaya, Odisha and West Bengal.

Decline of **more than 4 m** has also been observed in pockets in the states/UTs of Dadra & Nagar Haveli, Delhi, Gujarat, Haryana, Maharashtra, Punjab, Rajasthan, Telangana and Uttaraknand.



Water Level Fluctuation with Decadal Mean (August-2009 to August-2018) to August- 2019

A comparison of depth to water level of August 2019 with decadal mean of August (2009-2018) indicate that about 55% (7828) of wells are showing rise in water level, out of which 42% (5978) wells are showing rise of less than 2 m. About 9% (1326) wells are showing rise in water in the range of 2-4 m and about 4 % (524) wells are showing rise in water level in the range of more than 4 m. About 45% (6494) wells are showing decline in water level, out of which 29% (4164) wells are showing decline in water in the range of 0-2 m. 16 % (1376) wells are showing decline in water level in 2-4 m range and remaining 7% (954) are in the range of more than 4 m. A comparison of depth to water level of August 2019 with decadal mean of August (2009-2018) indicates that more than **50%** of the wells analysed have registered decline in ground water level , mostly in the range of 0-2 m, in the states/UTs namely Arunachal Pradesh, Assam, Bihar, Chandigarh, Dadra Nagar Haveli, Delhi, Haryana, Kerala, Meghalaya, Pondicherry, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. Decline of **more than 4 m** has also been observed in pockets in the states/UTs of Chandigarh, Chhattisgarh, Delhi, Gujarat, Haryana, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and Uttarakhand. Rise in water level is seen in the states, mostly in the range of 0-2 m, such as Andhra Pradesh, Assam, Chhatishgarh, Goa, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Odisha, Tripura etc. **(Plate XVIII, Annexure XIII)**



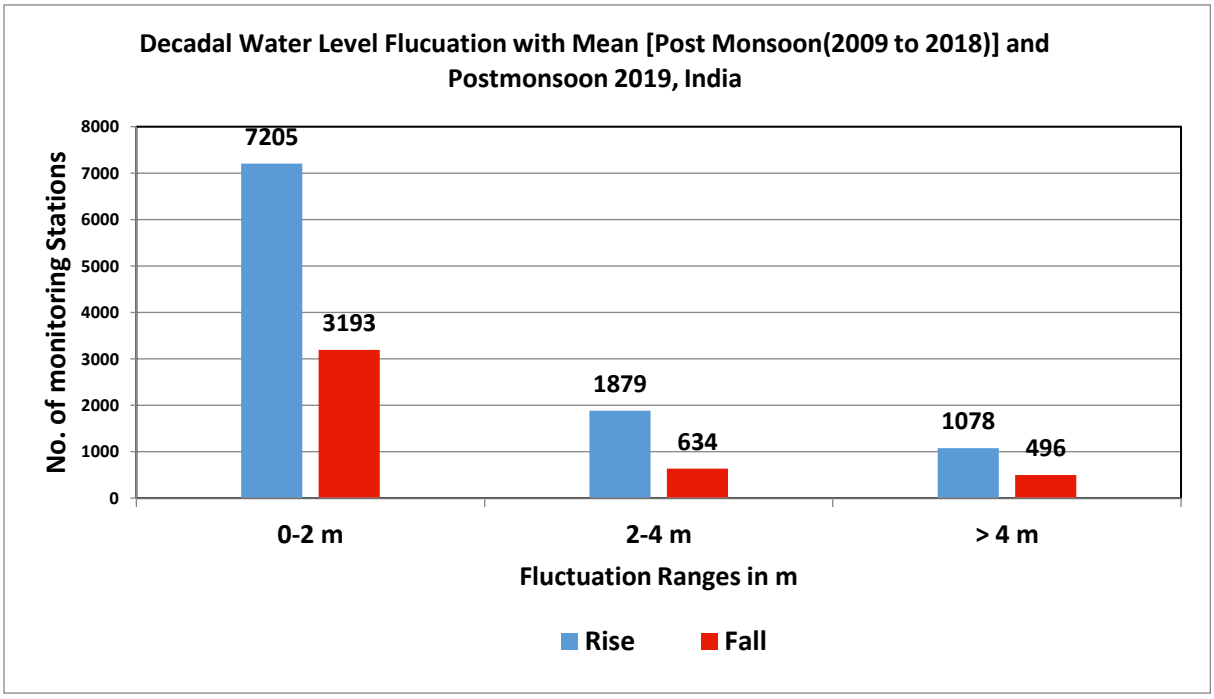
WATER LEVEL FLUCTUATION WITH DECADAL MEAN (NOV-2009 TO NOV-2018) TO NOVEMBER-2019

A comparison of depth to water level of November 2019 with decadal mean of November (2009-2018) indicate that, out of 14499 wells analysed, 10162 (70%) of wells are showing rise in water level, out of which 50% (7205) wells are showing rise of less than 2 m. About 13% (1879) wells are showing rise in water level in the range of 2-4 m and about 7% (1078) wells are showing rise in water level in the range of more than 4 m. 4323 (about 30%) wells are showing decline in water level, out of which 22% (3193) wells are showing decline in water in the range of 0-2 m. 4%(634) wells are showing decline in water level in 2-4 m range and remaining 4% (496) are in the range of more than 4 m. **(Plate XIX, Annexure XIV)**

A comparison of depth to water level of November 2018 with decadal mean of November (2008-2017) indicates that more than **50%** of the wells analysed have registered decline in ground water level , mostly in the range of 0-2 m, in all the states/UTs except few states such as Daman & Diu, Himachal Pradesh, Meghalaya, Pondicherry, Tripura and Uttarakhand.

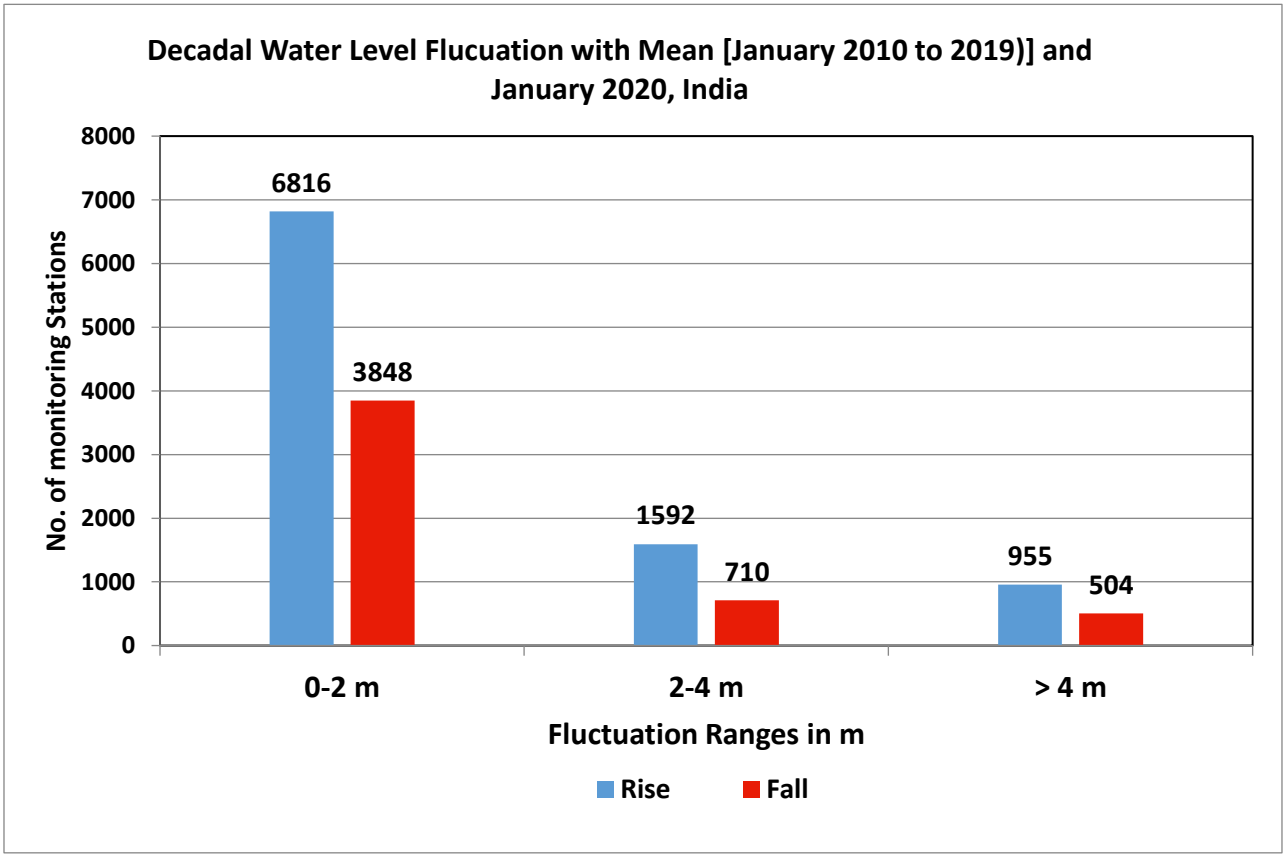
Decline of **more than 4 m** has also been observed in pockets in the states/UTs of Chandigarh, Delhi, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu and Telangana.

Rise in water level is seen in few states, mostly in the range of 0-2 m, in small patches, such as Rajasthan, Gujarat, Madhya Pradesh, Odisha and Telangana

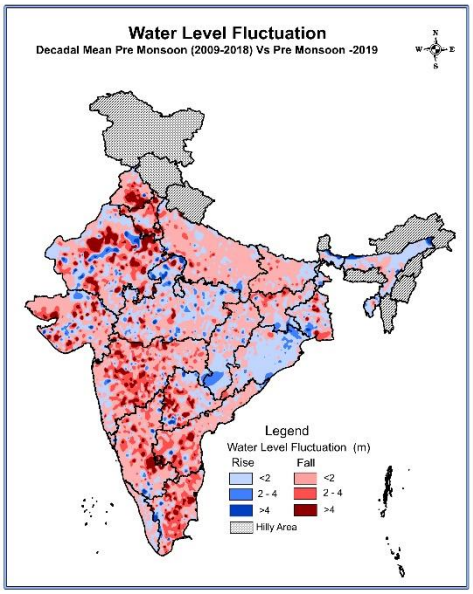


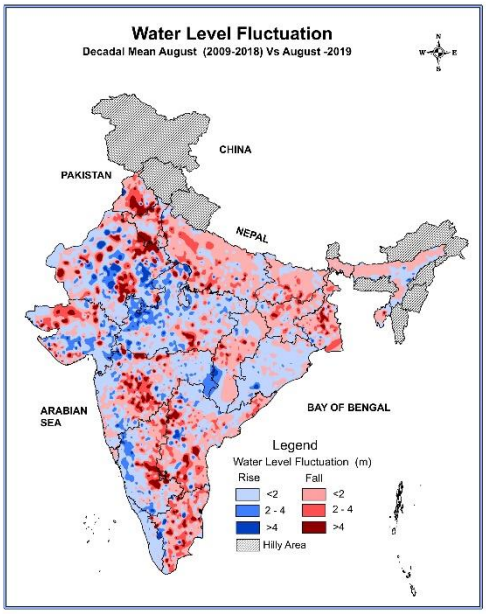
WATER LEVEL FLUCTUATION WITH DECADAL MEAN (JAN 2010 TO JAN 2019) TO JANUARY 2020

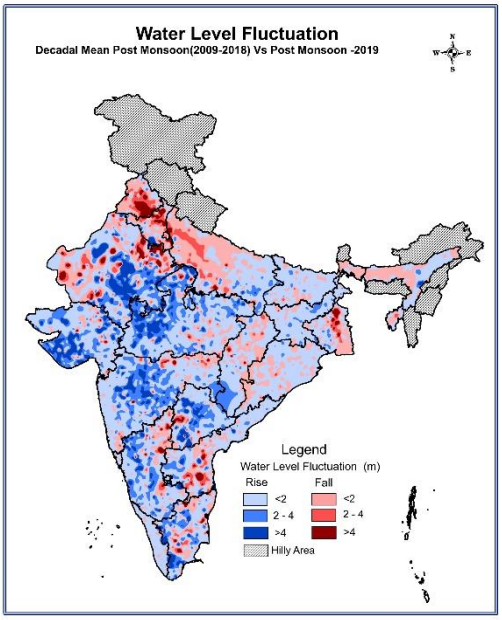
A comparison of depth to water level of January 2020 with decadal mean of January (2010-2019) indicates that 9363 (about 65%) of wells are showing rise in water level, out of which 47% (6816) wells are showing rise of less than 2 m. About 11% (1592) wells are showing rise in water level in the range of 2-4 m and only 7% (955) wells are showing rise in the range of more than 4 m. 5062 (about 35%) wells are showing decline in water level, out of which 27% (3848) wells are showing decline in water in the range of 0-2 m. 5% (710) wells are showing decline in water level in 2-4 m range and remaining 3% (504) are in the range of more than 4 m. Decline in water level of more than 4 m is mostly prominent in the states of Andhra Pradesh, Dadra Nagar Haveli, Delhi, Gujarat, Haryana, Maharashtra, Punjab, Rajasthan, Tamil Nadu and Telangana. Rise in water level of more than 4 m is also observed in few states in isolated pockets in Tamil Nadu, Rajasthan **(Plate XX, Annexure XV)**

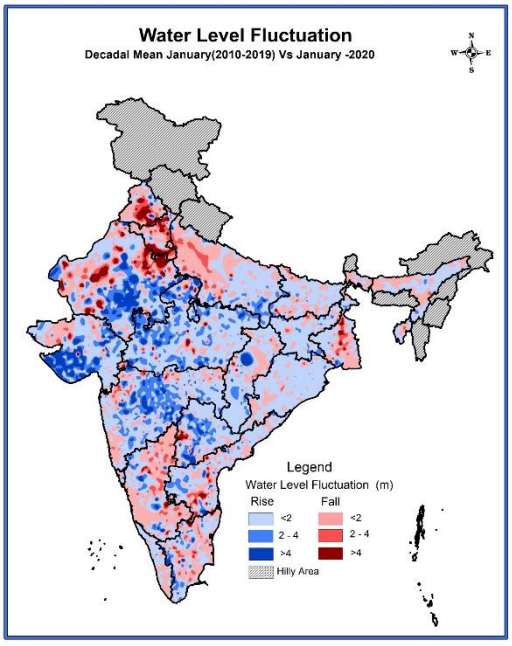


DECADAL WATER LEVEL FLUCTUATION AT A GLANCE



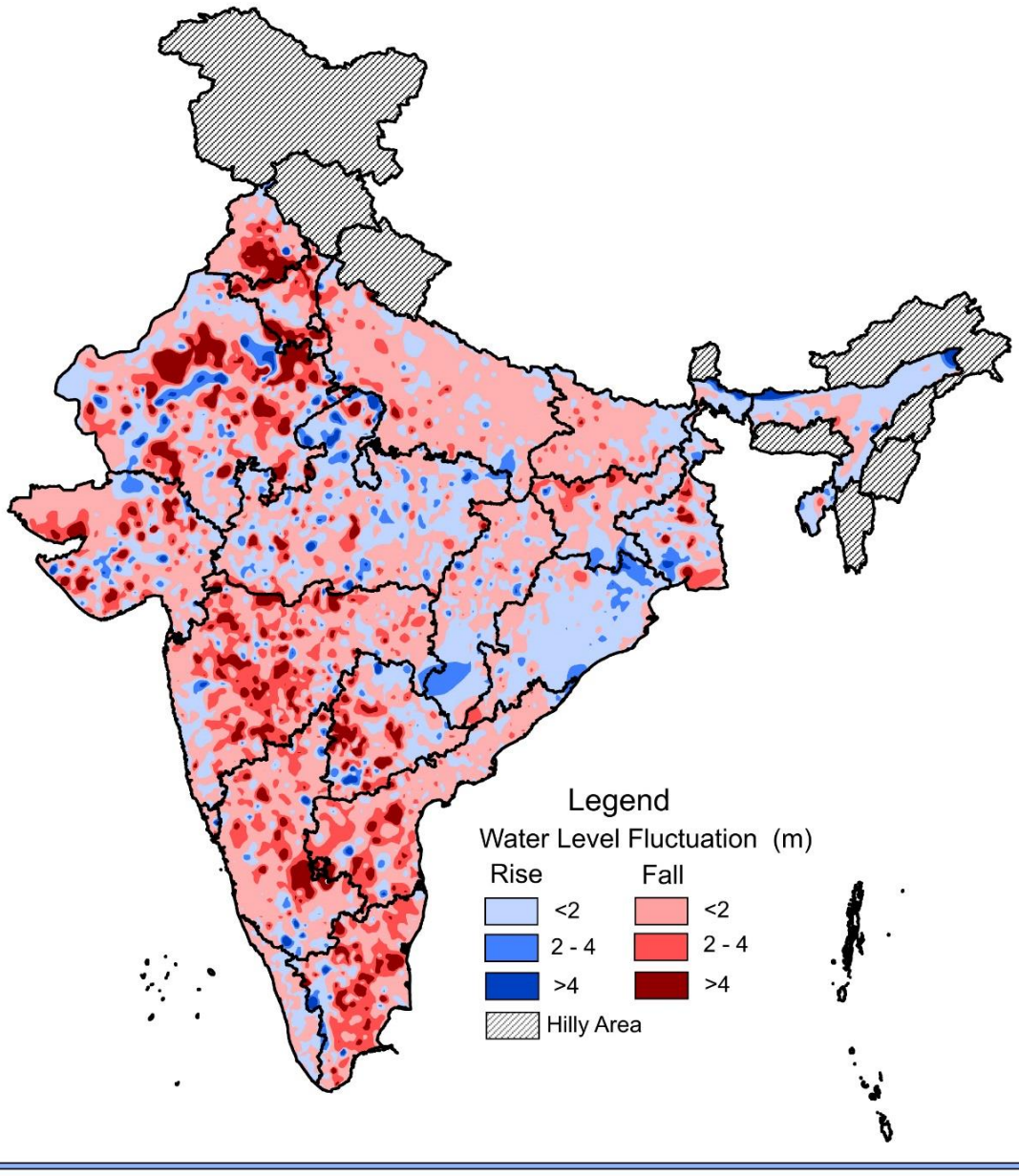


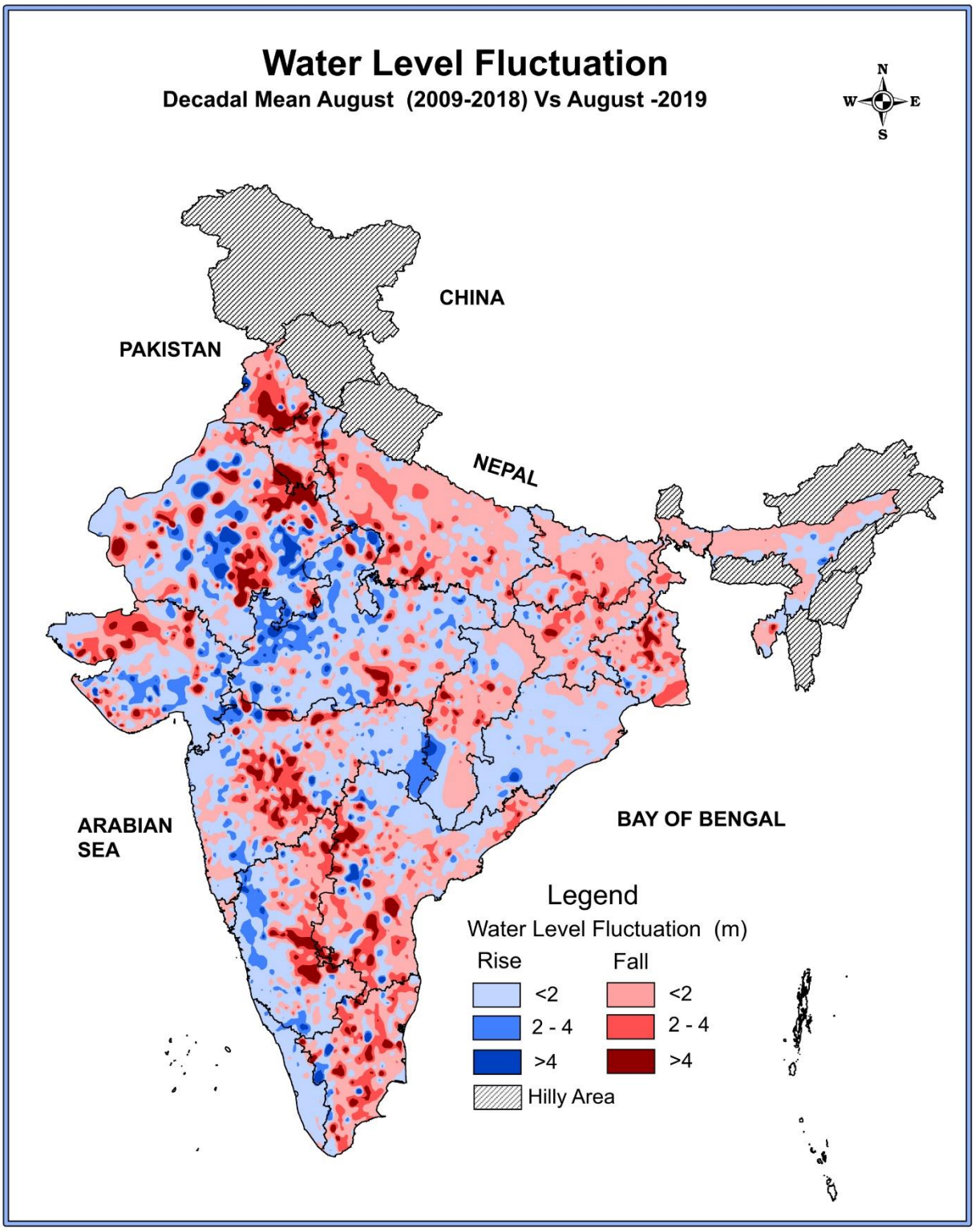




Water Level Fluctuation

Decadal Mean Pre Monsoon (2009-2018) Vs Pre Monsoon -2019




Water Level Fluctuation
Decadal Mean August (2009-2018) Vs August -2019
N
W
E
S
CHINA
PAKISTAN
NEPAL
ARABIAN SEA
BAY OF BENGAL
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area

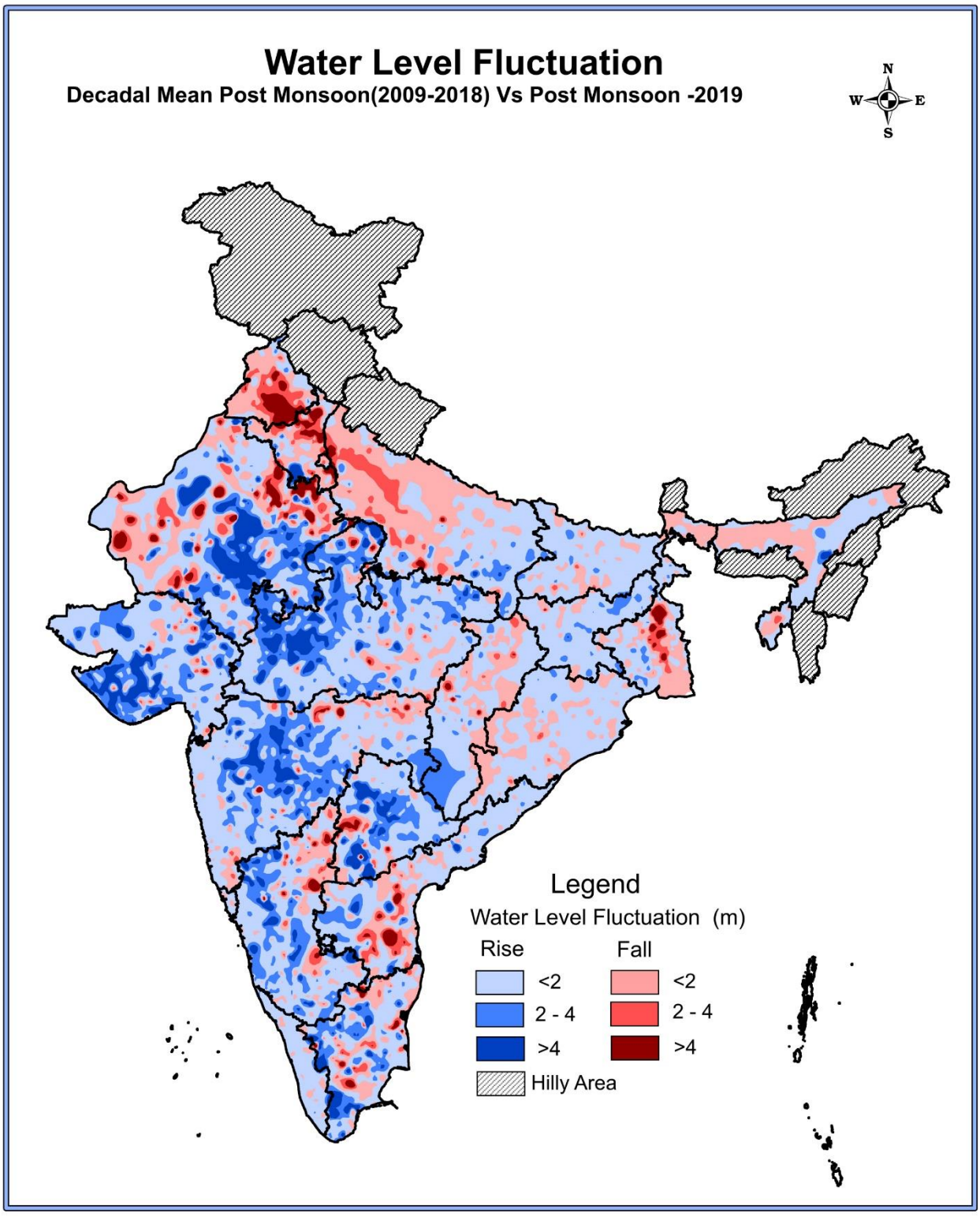
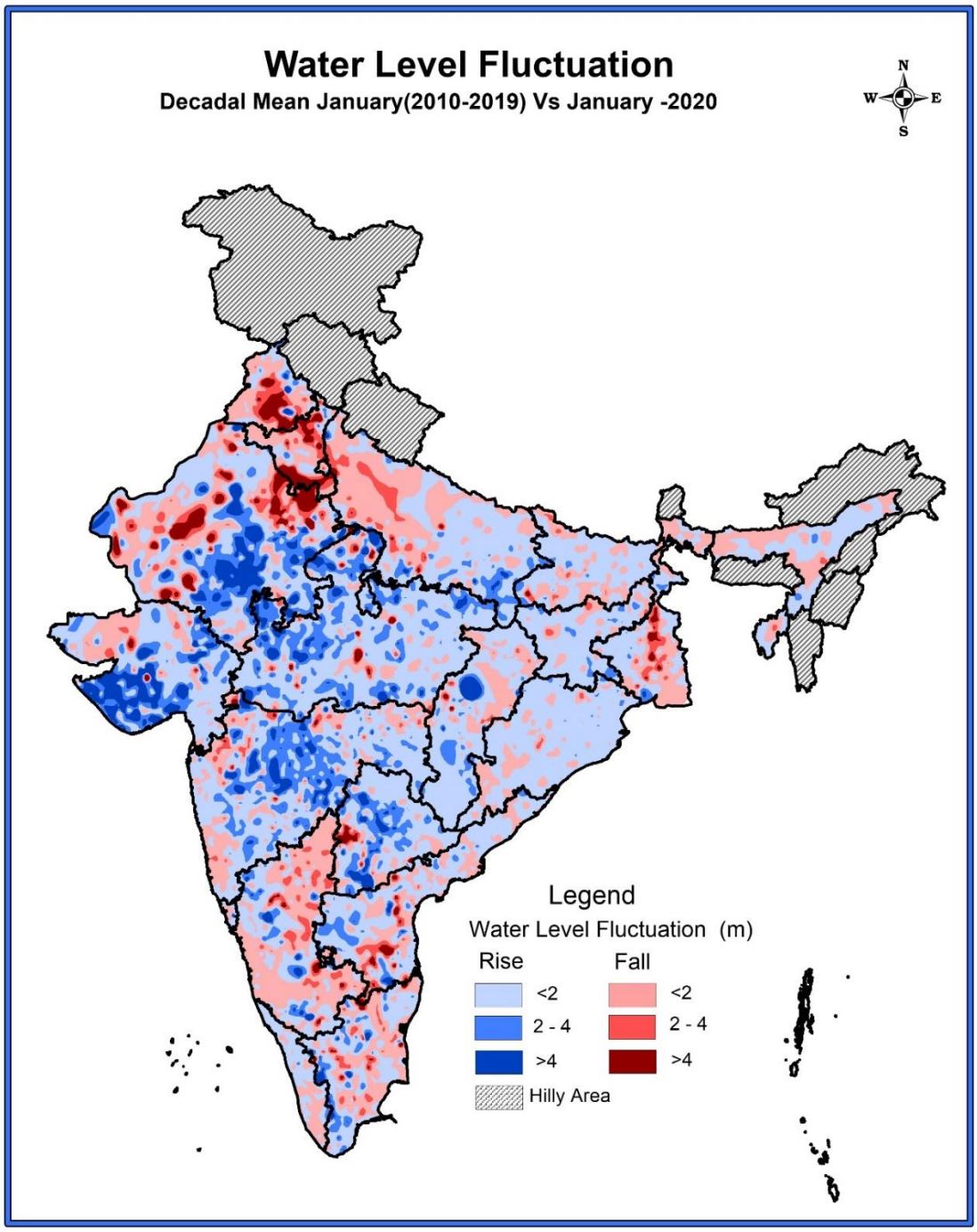

Water Level Fluctuation
Decadal Mean Post Monsoon(2009-2018) Vs Post Monsoon -2019
N
W
E
S
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area

PLATE – XX


Water Level Fluctuation
Decadal Mean January(2010-2019) Vs January -2020
N
W
E
S
Legend
Water Level Fluctuation (m)
Rise
Fall
<2
2 - 4
>4
<2
2 - 4
>4
Hilly Area

2.0 Rainfall Variations

Variability in the onset, withdrawal and quantum of rainfall during the monsoon season has profound impacts on water resources, power generation, agriculture, economics and ecosystems in the country. The variation in climate is perhaps greater than any other area of similar size in the world. There is a large variation in the amounts of rainfall received at different locations. The average annual rainfall is 119 cm, but it has great spatial variations. The areas on the Western Ghats and the Sub-Himalayan areas in North East and Meghalaya Hills receive heavy rainfall of over 250 cm annually, whereas the Areas of Northern parts of Kashmir and Western Rajasthan receive rainfall less than 40 cm. The rainfall pattern roughly reflects the different climate regimes of the country, which vary from humid in the northeast (about 180 days rainfall in a year), to arid in Rajasthan (20 days rainfall in a year). Due to climatic changes, in recent times , the occurrence of high intensity rainfall event has increased and the number of rainy days have decreased. In some years, it has been observed that, the southwest monsoon has extended beyond its normal withdrawal date.

Normal Annual Rainfall:

The rainfall over India has large spatial as well as temporal variability. For the country as whole, mean monthly rainfall during July (286.5 mm) is highest and contributes about 24.2% of annual rainfall (1182.8 mm). The mean rainfall during August is slightly lower and contributes about 21.2% of annual rainfall. June and September rainfall are almost similar and contribute 13.8% and 14.2% of annual rainfall, respectively. The mean south-west monsoon (June, July, August & September) rainfall (877.2 mm) contributes 74.2% of annual rainfall (1182.8 mm). Contribution of pre-monsoon (March, April & May) rainfall and post-monsoon (October, November & December) rainfall in annual rainfall is mostly the same (11%). Coefficient of variation is higher during the months of November, December, January and February. The Thematic map of distribution of annual normal rainfall is given in **Plate XXI**. The map shows that, one state i.e., Rajasthan receives annual rainfall between 250 – 500 mm, 7 states between 500 mm – 1000 mm, 16 states between 1000 – 2000 mm, three states between 2000-3000 mm and six states more than 3000 mm in a year.

Normal Monsoon Rainfall:

The SW monsoon is the most significant feature of the Indian climate. The season is spread over four months, but the actual period at a particular place depends on onset and withdrawal dates. It varies from less than 75 days over West Rajasthan, to more

than 120 days over the south-western regions of the country contributing to about 75% of the annual rainfall. The onset of the SW monsoon normally starts over the Kerala coast, the southern tip of the country by 1 June, advances along the Konkan coast in early June and covers the whole country by middle of July. However, onset occurs about a week earlier over islands in the Bay of Bengal. The monsoon is influenced by global and local phenomenon like El Nino, northern hemispheric temperatures, sea surface temperatures, snow cover etc. Normal monsoon rainfall more than 150cm is being observed over most parts of northeast India, Konkan & Goa.. It ranges from 317 mm in Tamilnadu state to 2970 mm in Goa state with an average of 1160 mm. In the North-eastern states it ranges from 1330 mm to 2787 mm with an average of 1716 mm.

Normal Post-monsoon rainfall:

North-East (NE) monsoon or Post-monsoon season is transition season associated with the establishment of the north-easterly wind regime over the Indian subcontinent. Meteorological subdivisions namely Coastal Andhra Pradesh Rayalaseema , Tamil Nadu, Kerala and South Interior Karnataka receive good amount of rainfall accounting for about 35% of their annual total in these months. Many parts of Tamil Nadu and some parts of Andhra Pradesh and Karnataka receive rainfall during this season due to the storms forming in the Bay of Bengal. It ranges from 18 mm in Rajasthan state to 910 mm in Puducherry UT with an average of 200 mm. In the northeastern states it ranges from it ranges from 169 mm to 315 mm with an average of 239 mm.

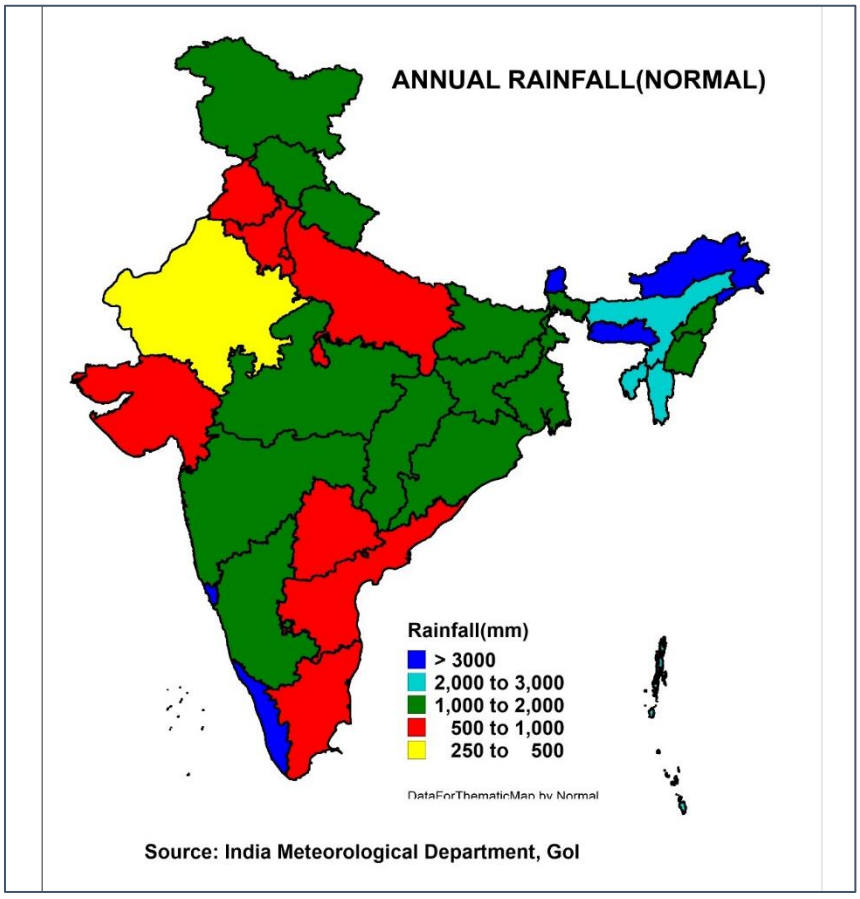
Rainfall Variation in 2019

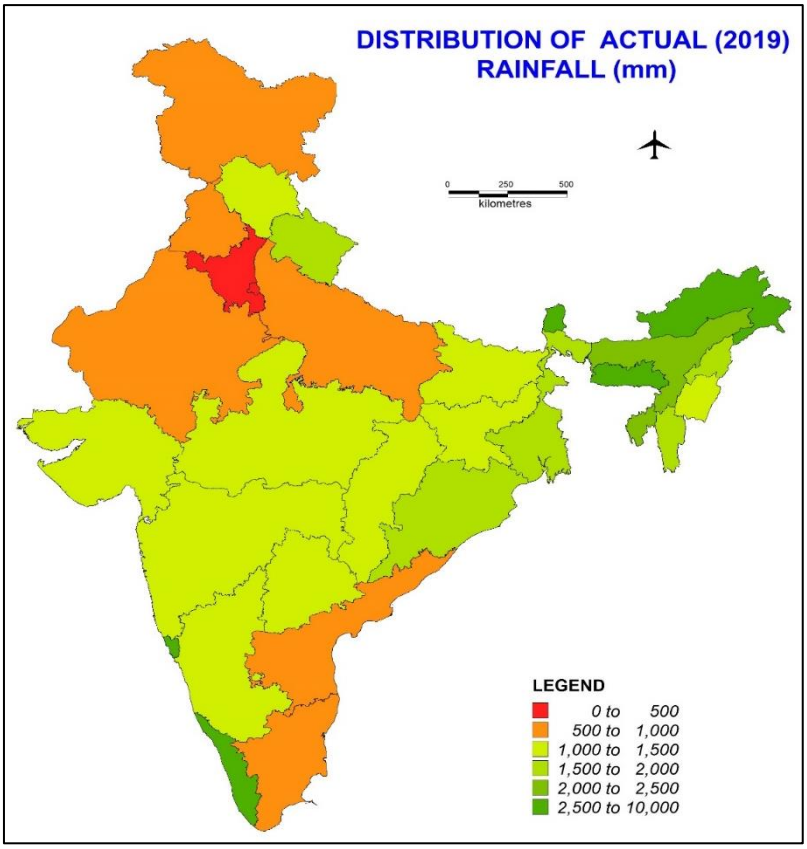
The distribution of annual rainfall in 2019 is given as thematic map in **Plate XXII**. The map shows that, two states i.e., Haryana and Delhi received annual rainfall less than 500 mm, 7 states between 500 mm – 1000 mm, 15 states between 1000 – 2000 mm, five states between 2000-3000 mm and three states more than 3000 mm. State-wise monthly and annual observed rainfall, and its percentage departure from normal rainfall is given in **Table 1.** The state-wise seasonal and annual observed rainfall and its departure from normal is given in **Table 2**. This data is based on India-WRIS, IMD Gridded Data. It may be observed that during 2019, highest rainfall of 4660 mm was recorded at Goa state and the lowest rainfall of 400 mm was received at Haryana state. However, on comparing with normal rainfall, it may be seen that, Daman & Diu state has the highest positive departure of 299% from its normal whereas Meghalaya state is with highest negative departure of 52% from its normal rainfall. Negative departure from normal(more than 10%) in 12 out of 32 states. The

national average annual rainfall is 1605 mm with a departure with coefficient of variation of 60% , which is very high and departure of mean rainfall from normal as -3%.

Overall, the rainfall distribution and quantity has been very good during this year. It may be observed from Table 2 that the variation of southwest monsoon rainfall is very high (68%) and it ranges from 289 mm (63% of normal) in Haryana to 4066 mm (146% of normal) in Goa state. This is a significant contributor of rainfall in India and is about 72% and the rest 28% is from non-monsoon season i.e. Oct to May. Whereas , Tamilnadu state and Pondicherry and Jammu & Kashmir UT's have received less than 42% of its annual rainfall from non-monsoon season. The states of Andhra Pradesh, Dam & Diu, Goa, Gujarat, Madhya Pradesh, Maharashtra, Pondicherry, Rajasthan, Tamilnadu and Telangan states have received more than normal (positive departure of more than 10%) rainfall in the monsoon season. The states of Arunachal Pradesh, Chandigarh, Delhi, Haryana, Jammu 7 Kashmir, Himachal Pradesh, Jharkhund, Manipur, Meghalaya, Nagaland, Uttar Pradesh, Uttarakhund and West Bengal have received rainfall with negative departure (more than 10%) from normal.The national average monsoon rainfall is 1157 mm with a negative departure of 4% from normal.

Plate : XXI




DISTRIBUTION OF ACTUAL (2019)
RAINFALL (mm)
0 250 500
kilometres
LEGEND
0 to 500
500 to 1,000
1,000 to 1,500
1,500 to 2,000
2,000 to 2,500
2,500 to 10,000

3.0 Ground Water Resource Availability and Development Status

The Dynamic ground water resources (as in March 2017) of the entire country have been assessed jointly by CGWB and State Ground Water Departments under the supervision of the State level Committees. The dynamic ground water resources are also known as Annual Ground Water Recharge, since it gets recharged every year from rainfall and other sources (secondary sources) such as applied irrigation water, surface water bodies, water conservation structures, etc.

3.1 Dynamic Fresh Ground Water Resources

As per the 2017 assessment of Dynamic Ground water resources, the total Annual Ground Water Recharge for the entire country has been assessed as 432 billion cubic meter (bcm) and total natural discharges works out to be 39 bcm. Hence, Annual extractable Ground Water Resources for the entire country is 393 bcm.

Major source of ground water recharge is the monsoon rainfall, which is about 58% of the total annual ground water recharge i.e. 252 bcm. The overall contribution of rainfall (both monsoon & non-monsoon) to country's total annual Ground water recharge is 67% and the share of other sources viz. canal seepage, return flow from irrigation, recharge from tanks, ponds and water conservation structures taken together is 33%.

The contribution in Annual Ground Water Recharge from rainfall during monsoon season is more than 70% in the states/UT of Assam, Goa, Gujarat, Jharkhand, Madhya Pradesh, Meghalaya, Mizoram, Nagaland, Rajasthan, Sikkim, Andaman & Nicobar, Dadra & Nagar Haveli Daman & Diu and Lakshadweep.

State-wise Ground Water Resources of India (as on 31st March 2017) are given in **Table 3.1.** The over-all scenario of ground water resource and extraction in the country is given in **Plate XXVI.**

Volumetric estimates are dependent on the areal extent of the assessment units. In order to compare the ground water resource of different assessment units, the

volumetric estimates of annual ground water recharge have been converted to depth units (m) by dividing the annual groundwater recharge by the area of the respective assessment units (km^2). Spatial variation in annual ground water recharge (m) is shown in **Plate XXIV.** Annual Groundwater recharge is significantly high in the Indus-Ganga-Brahmaputra alluvial belt in the North, East and North East India covering the states of Punjab, Haryana, Uttar Pradesh, Bihar, West Bengal and valley areas of North Eastern States, where rainfall is plenty and thick piles of unconsolidated alluvial formations are conducive for recharge. Annual Ground Water Recharge in these regions varies from 0.25 to more than 0.5 m. The coastal alluvial belt particularly Eastern Coast also has relatively high annual ground water recharge, in the range 0.25 to more than 0.5 m. In western India, particularly Rajasthan and parts of northern Gujarat that have arid climate, the annual ground water recharge is scanty, mostly up to 0.025 m. Similarly, in major parts of the southern peninsula covered with hard rock terrains, annual ground water recharge mostly ranges from 0.10 to 0.15m. This is primarily because of comparatively low infiltration and storage capacity of the rock formations prevailing in the region. The remaining part of Central India is mostly characterized by moderate recharge in the range of 0.10 to 0.25m.

The overall estimate of Annual Ground Water Recharge for the entire country shows a decrease of 15 bcm in the present estimate as compared to the last assessment i.e. 2013. The Annual Ground water extraction for irrigation, domestic and Industrial uses has also decreased by 4.35bcm. The main reasons for these variations is attributed to changes in methodology, refinement of parameters for resources estimation, refinement in well census data and changing ground water regime.

3.2 Ground Water Extraction

The assessment of ground water extraction is carried out considering the Minor Irrigation Census data and sample surveys carried out by the State Ground Water

Departments. The Total Annual Ground Water Extraction of the entire country for the year 2017 has been estimated as 248.69 bcm. Agriculture sector is the predominant consumer of ground water resources. About 89% of total annual ground water extraction i.e. 221.46 bcm is for irrigation use. Only 27.24 bcm is for Domestic & Industrial use, which is about 11% of the total extraction. In the states of Arunachal Pradesh, Delhi, Goa, Jammu & Kashmir, Kerala, Mizoram, Nagaland, Sikkim and Tripura and Union Territories of Andaman & Nicobar Island, Chandigarh, Dadra & Nagar Haveli, and Lakshadweep the ground water extraction for domestic & industrial uses is more than 40%.

The overall stage of ground water development in the country is 63%. The stage of ground water Extraction is very high in the states of Delhi, Haryana, Punjab and Rajasthan, where it is more than 100%, which implies that in these states the annual ground water consumption is more than annual extractable ground water resources. In the states of Himachal Pradesh, Tamil Nadu, Uttar Pradesh and UTs of Chandigarh and Puducherry, the stage of ground water Extraction is between 70-100%. In rest of the states / UTs the stage of ground water development is below 70%.

3.3 Categorization of Assessment Units

Out of the total 6881 assessment units (Blocks/ Taluks/ Mandals/ Districts/Firkas/Valleys), 1186 has been categorized as Over-exploited, 313 as Critical, 972 as Semi-critical, and 4310 units as Safe. There are 100 assessment units, which are completely saline. The percentage of Over-exploited and Critical administrative units are more than 25% of the total units are in Delhi, Haryana, Himachal Pradesh, Karnataka, Punjab, Rajasthan, Tamil Nadu & Puducherry . The State-wise categorization of Blocks/ Taluks/ Mandals/ Districts/Firkas/Valleys and Quality problems in assessment units are given in Table 3.2. The Categorization of assessment units is depicted in a thematic map given in **Plate XXV**.

PLATE – XXIII

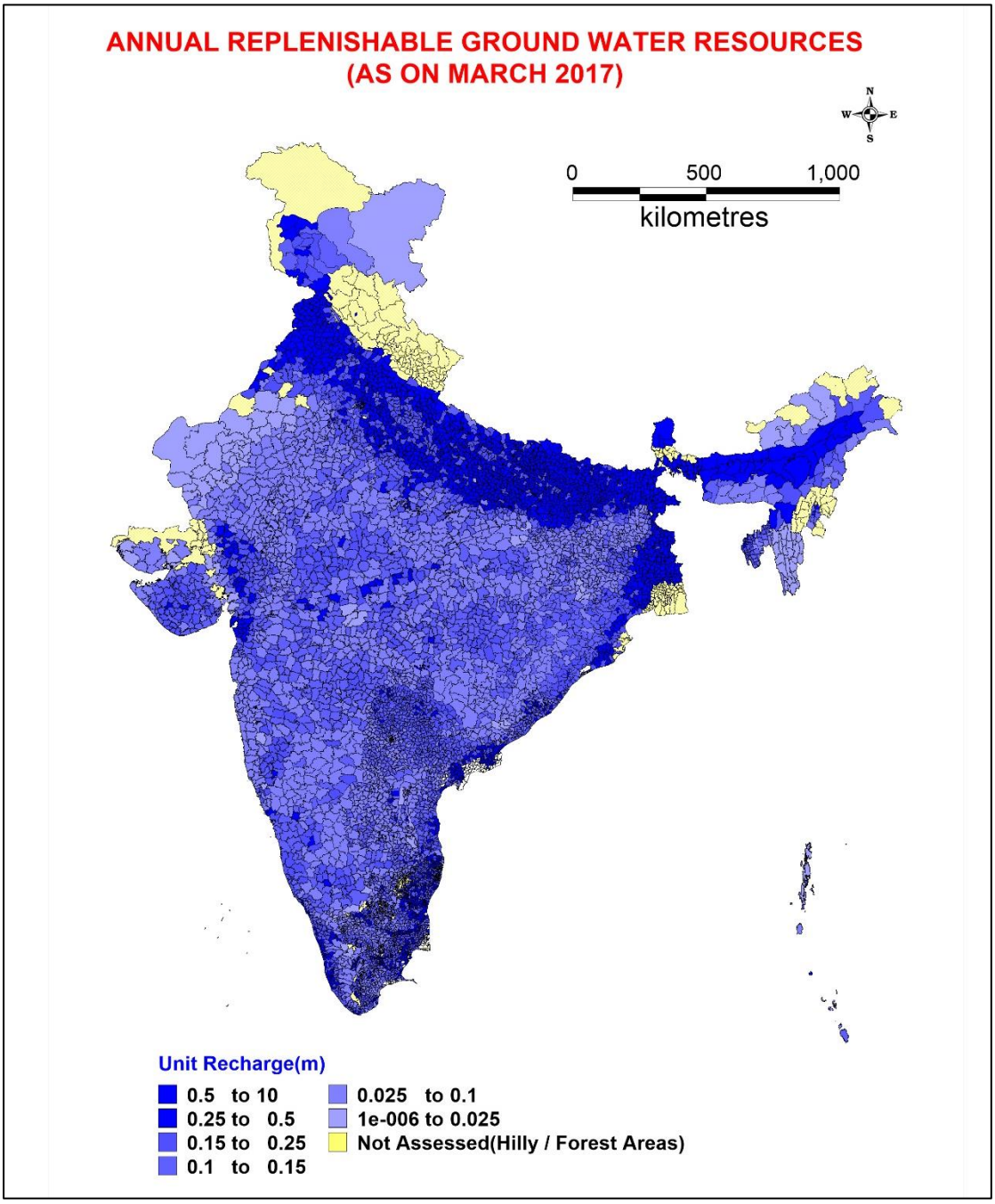

ANNUAL REPLENISHABLE GROUND WATER RESOURCES
(AS ON MARCH 2017)
N
W
E
S
0
500
1,000
kilometres
Unit Recharge(m)
0.5 to 10
0.25 to 0.5
0.15 to 0.25
0.1 to 0.15
0.025 to 0.1
1e-006 to 0.025
Not Assessed(Hilly / Forest Areas)

PLATE – XXIV

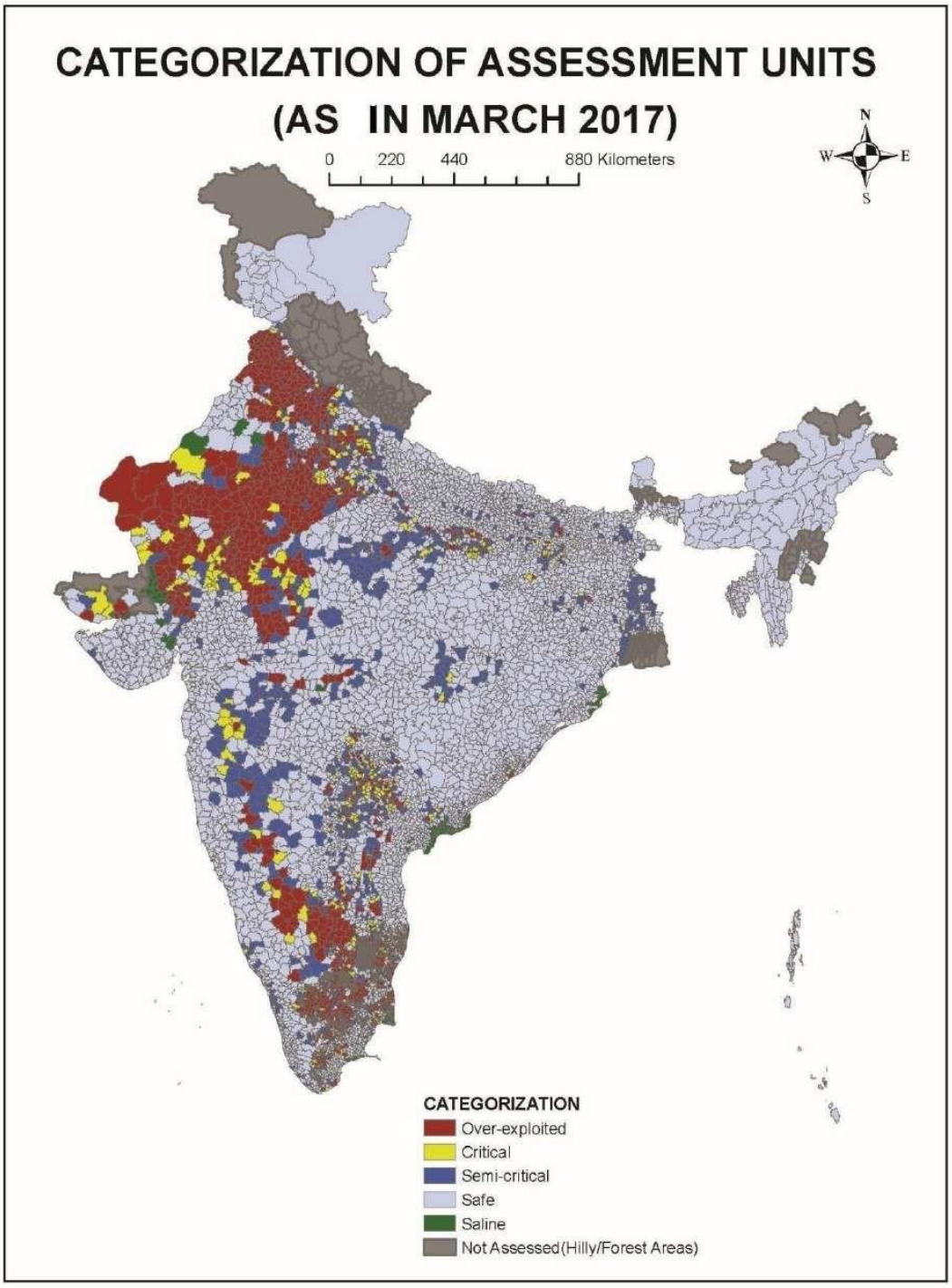
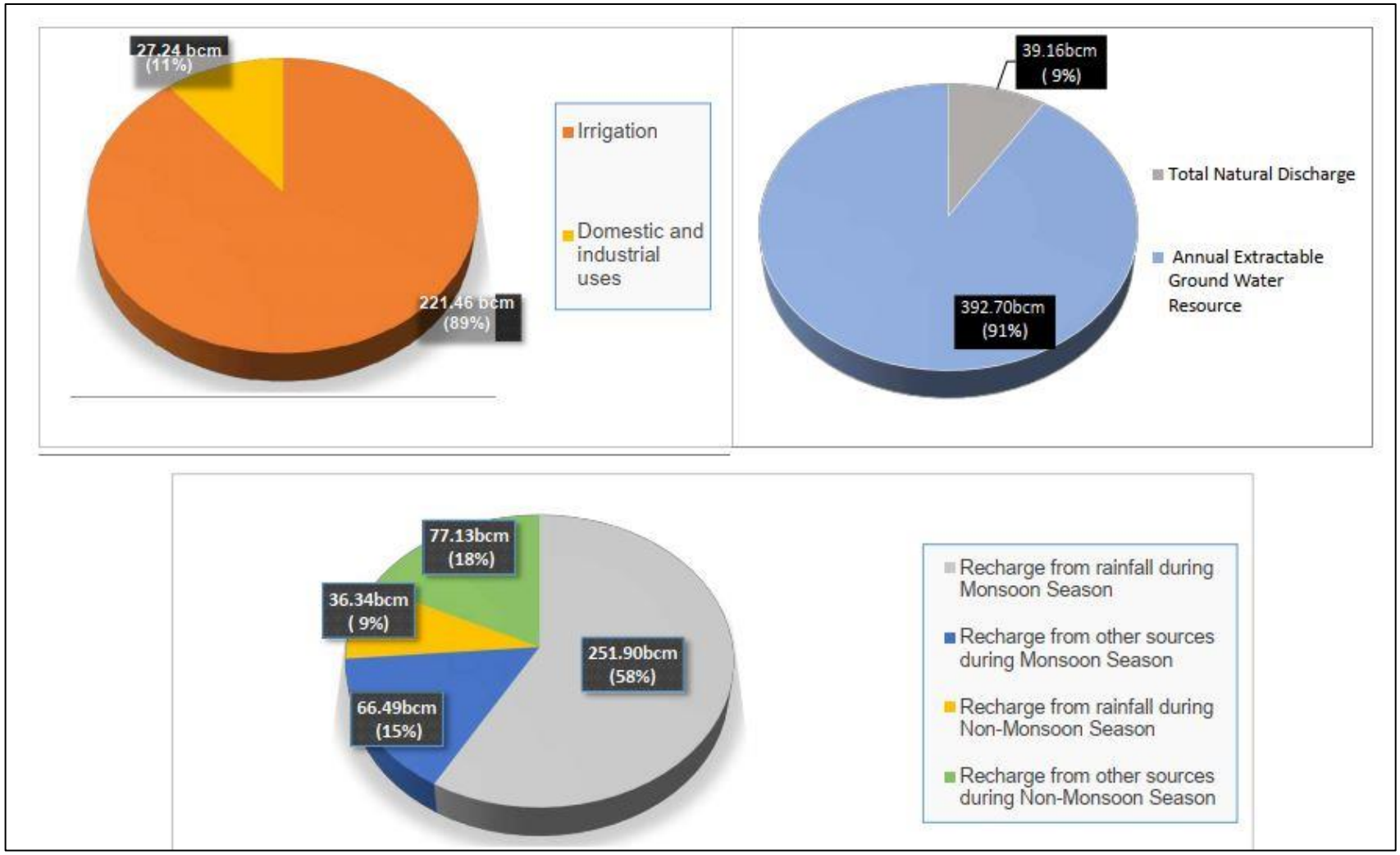

CATEGORIZATION OF ASSESSMENT UNITS
(AS IN MARCH 2017)
0 220 440 880 Kilometers
N
W
E
S
CATEGORIZATION
Over-exploited
Critical
Semi-critical
Safe
Saline
Not Assessed(Hilly/Forest Areas)

PLATE – XXVI



Ground Water Resource Availability and Utilization

STATE-WISE DYNAMIC GROUND WATER RESOURCES OF INDIA, 2017

(in bcm)

S. No.	States / Union Territories	Ground Water Recharge					Total Natural Discharges	Annual Extractable Ground Water Resource	Current Annual Ground Water Extractio				Annual GW Allocation for for Domestic Use as on 2025	Net Ground Water Availability for future use	Stage of Ground Water Extraction (%)
		Monsoon Season		Non-monsoon Season		Total Annual Ground Water Recharge			Irrigation	Industrial	Domestic	Total			
		Recharge from rainfall	Recharge from other sources	Recharge from rainfall	Recharge from other sources										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	States														
1	**Andhra Pradesh**	9.96	5.62	1.21	4.42	21.22	1.07	20.15	7.85	0.14	0.90	8.90	1.48	12.31	44.15
2	**Arunachal Pradesh**	1.89	0.18	0.95	0.01	3.02	0.36	2.67	0.00	0.00	0.01	0.01	0.03	2.64	0.28
3	**Assam**	20.22	0.43	7.28	0.74	28.67	4.42	24.26	1.97	0.06	0.69	2.73	0.79	21.43	11.25
4	**Bihar**	19.83	3.95	3.14	4.50	31.41	2.43	28.99	10.78	0.66	1.83	13.26	1.83	15.78	45.76
5	**Chhattisgarh**	7.82	1.36	0.76	1.64	11.57	1.00	10.57	3.98	0.05	0.67	4.70	0.79	5.76	44.43
6	**Delhi**	0.13	0.06	0.03	0.11	0.32	0.02	0.30	0.09	0.02	0.24	0.36	0.29	0.02	119.61
7	**Goa**	0.19	0.03	0.01	0.05	0.27	0.11	0.16	0.02	*	0.03	0.05	0.04	0.07	33.50
8	**Gujarat**	15.95	3.40	0.00	3.02	22.37	1.12	21.25	12.84	0.11	0.63	13.58	0.90	7.98	63.89
9	**Haryana**	3.56	2.55	1.03	3.00	10.15	1.01	9.13	11.53	0.34	0.63	12.50	0.72	0.87	136.91
10	**Himachal Pradesh**	0.34	0.02	0.11	0.04	0.51	0.05	0.46	0.20	0.00	0.19	0.39	0.34	0.16	86.37
11	**Jammu & Kashmir**	1.00	0.50	0.88	0.51	2.89	0.29	2.60	0.20	0.07	0.50	0.76	0.50	1.84	29.47
12	**Jharkhand**	5.25	0.13	0.41	0.42	6.21	0.52	5.69	0.80	0.22	0.56	1.58	0.56	4.13	27.73
13	**Karnataka**	6.59	4.36	2.67	3.22	16.84	2.05	14.79	9.39	*	0.95	10.34	1.14	5.41	69.87
14	**Kerala**	3.91	0.04	0.68	1.13	5.77	0.56	5.21	1.22	0.01	1.44	2.67	1.57	2.41	51.27
15	**Madhya Pradesh**	27.10	1.51	0.82	6.99	36.42	1.95	34.47	17.43	0.22	1.24	18.88	1.72	15.84	54.76
16	**Maharashtra**	20.59	2.29	0.53	8.23	31.64	1.74	29.90	15.10	0.003	1.22	16.33	2.28	12.91	54.62
17	**Manipur**	0.23	0.01	0.17	0.02	0.43	0.04	0.39	0.00	0.00	0.00	0.01	0.04	0.34	1.44
18	**Meghalaya**	1.37	0.01	0.43	0.02	1.83	0.19	1.64	0.03	0.00	0.01	0.04	0.02	1.59	2.28
19	**Mizoram**	0.16	0.00	0.05	0.00	0.21	0.02	0.19	0.00	0.00	0.01	0.01	0.01	0.18	3.82
20	**Nagaland**	1.65	0.03	0.52	0.00	2.20	0.22	1.98	0.00	0.00	0.02	0.02	0.02	1.96	0.99
21	**Odisha**	10.53	2.34	1.50	2.37	16.74	1.17	15.57	5.28	0.14	1.15	6.57	1.30	8.85	42.18
22	**Punjab**	5.54	11.83	1.31	5.25	23.93	2.35	21.58	34.56	0.20	1.01	35.78	1.41	1.09	165.77
23	**Rajasthan**	9.74	0.78	0.24	2.44	13.21	1.22	11.99	14.85	0.00	1.92	16.77	2.67	0.88	139.88
24	**Sikkim**	5.20	0.00	0.43	0.00	5.63	4.11	1.52	0.00	0.00	0.00	0.00	0.01	1.51	0.06
25	**Tamil Nadu**	6.67	9.41	1.89	2.26	20.22	2.02	18.20	13.06	0.00	1.67	14.73	1.85	5.66	80.94
26	**Telangana**	7.56	1.42	1.88	2.76	13.62	1.25	12.37	7.09	*	1.00	8.09	1.39	4.26	65.45
27	**Tripura**	0.80	0.06	0.40	0.26	1.53	0.29	1.24	0.02	0.00	0.08	0.10	0.11	1.11	7.88
28	**Uttar Pradesh**	37.73	11.67	1.59	18.93	69.92	4.60	65.32	40.89	*	4.95	45.84	5.96	20.36	70.18
29	**Uttarakhand**	1.15	0.93	0.09	0.87	3.04	0.15	2.89	1.30	0.13	0.22	1.64	0.22	1.25	56.83
30	**West Bengal****	18.71	1.51	5.26	3.85	29.33	2.77	26.56	10.84	*	1.00	11.84	1.53	14.19	44.60
	Total States	**251.36**	**66.41**	**36.30**	**77.06**	**431.13**	**39.09**	**392.04**	**221.33**	**2.38**	**24.77**	**248.47**	**31.52**	**172.82**	**63.38**
	Union Territories														
1	**Andaman & Nicobar**	0.35	0.00	0.02	0.00	0.37	0.04	0.33	0.00	0.00	0.01	0.01	0.01	0.32	2.74
2	**Chandigarh**	0.02	0.01	0.00	0.01	0.04	0.00	0.04	0.00	*	0.03	0.03	0.03	0.00	89.00
3	**Dadra & Nagar Haveli**	0.06	0.00	0.00	0.01	0.07	0.00	0.07	0.01	*	0.01	0.02	0.01	0.04	31.34
4	**Daman & Diu**	0.02	0.00	0.00	0.00	0.02	0.00	0.02	0.01	0.00	0.00	0.01	0.00	0.00	61.40
5	**Lakshdweep**	0.01	0.00	0.00	0.00	0.01	0.01	0.004	0.00	0.00	0.002	0.002	0.00	0.00	65.99
6	**Puducherry**	0.09	0.07	0.02	0.05	0.23	0.02	0.20	0.11	*	0.04	0.15	0.04	0.05	74.33
	Total UTs	**0.54**	**0.08**	**0.05**	**0.07**	**0.73**	**0.08**	**0.66**	**0.13**	**0.00**	**0.10**	**0.23**	**0.10**	**0.43**	**34.51**
	Grand Total	**251.90**	**66.49**	**36.34**	**77.13**	**431.86**	**39.16**	**392.70**	**221.46**	**2.38**	**24.87**	**248.69**	**31.62**	**173.25**	**63.33**

Note:

*Industrial and domestic draft has not been estimated separately in Goa, Himachal Pradesh, Karnataka, Rajasthan, Tamil Nadu, Uttar Pradesh, Chandigarh, Dadra & Nagar Haveli and Puducherry

**The Ground Water resources assessment as on 2013 has been considered for the state of West Bengal

CATEGORIZATION OF BLOCKS/ MANDALS/ TALUKAS IN INDIA (2017)												
S.No.	States / Union Territories	Total No. of Assessed	Safe		Semi-Critical		Critical		Over-Exploited		Saline	
			Nos.	%	Nos.	%	Nos.	%	Nos.	%	Nos.	%
	States											
1	**Andhra Pradesh**	670	501	75	60	9	24	4	45	7	40	6
2	**Arunachal Pradesh**	11	11	100	0	0	0	0	0	0	0	0
3	**Assam**	28	28	100	0	0	0	0	0	0	0	0
4	**Bihar**	534	432	81	72	13	18	3	12	2	0	0
5	**Chattisgarh**	146	122	84	22	15	2	1	0	0	0	0
6	**Delhi**	34	3	9	7	21	2	6	22	65	0	0
7	**Goa**	12	12	100	0	0	0	0	0	0	0	0
8	**Gujarat**	248	194	78	11	4	5	2	25	10	13	5
9	**Haryana**	128	26	20	21	16	3	2	78	61	0	0
10	**Himachal Pradesh**	8	3	38	1	13	0	0	4	50	0	0
11	**Jammu & Kashmir**	22	22	100	0	0	0	0	0	0	0	0
12	**Jharkhand**	260	245	94	10	4	2	1	3	1	0	0
13	**Karnataka**	176	97	55	26	15	8	5	45	26	0	0
14	**Kerala**	152	119	78	30	20	2	1	1	1	0	0
15	**Madhya Pradesh**	313	240	77	44	14	7	2	22	7	0	0
16	**Maharashtra**	353	271	77	61	17	9	3	11	3	1	0
17	**Manipur**	9	9	100	0	0	0	0	0	0	0	0
18	**Meghalaya**	11	11	100	0	0	0	0	0	0	0	0
19	**Mizoram**	26	26	100	0	0	0	0	0	0	0	0
20	**Nagaland**	11	11	100	0	0	0	0	0	0	0	0
21	**Odisha**	314	303	96	5	2	0	0	0	0	6	2
22	**Punjab**	138	22	16	5	4	2	1	109	79	0	0
23	**Rajasthan**	295	45	15	29	10	33	11	185	63	3	1
24	**Sikkim**	4	4	100	0	0	0	0	0	0	0	0
25	**Tamil Nadu**	1166	427	37	163	14	79	7	462	40	35	3
26	**Telangana**	584	278	48	169	29	67	11	70	12	0	0
27	**Tripura**	59	59	100	0	0	0	0	0	0	0	0
28	**Uttar Pradesh***	830	540	65	151	18	48	6	91	11	0	0
29	**Uttarakhand**	18	13	72	5	28	0	0	0	0	0	0
30	**West Bengal** **	268	191	71	76	28	1	0	0	0	0	0
	Total States	**6828**	**4265**	**62**	**968**	**14**	**312**	**5**	**1185**	**17**	**98**	**1**
	Union Territories											
1	**Andaman & Nicobar**	36	35	97	0	0	0	0	0	0	1	3
2	**Chandigarh**	1	0	0	1	100	0	0	0	0	0	0
3	**Dadra & Nagar Have**	1	1	100	0	0	0	0	0	0	0	0
4	**Daman & Diu**	2	1	50	0	0	1	50	0	0	0	0
5	**Lakshdweep**	9	6	67	3	33	0	0	0	0	0	0
6	**Puducherry**	4	2	50	0	0	0	0	1	25	1	25
	Total UTs	**53**	**45**	85	**4**	8	**1**	2	**1**	2	**2**	4
	Grand Total	**6881**	**4310**	**63**	**972**	**14**	**313**	**5**	**1186**	**17**	**100**	**1**

Note

Blocks- Bihar, Chattisgarh, Haryana, Jharkhand, Kerala, M.P., Manipur, Mizoram, Orissa, Punjab, Rajasthan, Tripura, Uttar Pradesh,

Taluks -Karnataka, Goa, Gujarat, Maharashtra

Mandals - Andhra Pradesh, Telangana

Districts/Valley- Arunachal Pradesh, Assam, Himachal Pradesh, Jammu & Kashmir, Meghalaya, Mizoram, Nagaland

Islands - Lakshdweep, Andaman & Nicobar Islands

Firka-Tamil Nadu

Region - Puducherry

UT - Chandigarh, Dadar & Nagar Haveli, Daman & Diu

Tehsil-NCT Delhi

***Uttar Pradesh:** There are total 820 block and 10 Cities

**The Ground Water resources assessment as on 2013 has been considered for the state of West Bengal

Annexure-I

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of Pre Monsoon-2019

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (m bgl)		Number & Percentage of Wells Showing Depth to Water Level (m bgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
1	**Andaman & Nicobar Island**	106	0.04	10	80	75.5	19	17.9	7	6.6	0	0.0	0	0.0	0	0.0
2	**Andhra Pradesh**	721	0.31	60.00	54	7.5	266	36.9	268	37.2	118	16.4	10	1.4	5	0.7
3	**Arunachal Pradesh**	18	2.25	4.82	10	55.6	3	16.7	4	22.2	1	5.6	0	0.0	0	0.0
4	**Assam**	237	0.14	17.39	42	17.7	141	59.5	46	19.4	8	3.4	0	0.0	0	0.0
5	**Bihar**	621	0.74	16.11	10	1.6	215	34.6	348	56.0	48	7.7	0	0.0	0	0.0
6	**Chandigarh**	13	3.02	47.64	0	0.0	3	23.1	1	7.7	3	23.1	4	30.8	2	15.4
7	**Chhattisgarh**	650	0.60	40.00	7	1.1	126	19.4	401	61.7	109	16.8	7	1.1	0	0.0
8	**Dadra & Nagar Haveli**	18	3.80	19.90	0	0.0	3	16.7	6	33.3	9	50.0	0	0.0	0	0.0
9	**Daman & Diu**	11	1.83	9.05	1	9.1	3	27.3	7	63.6	0	0.0	0	0.0	0	0.0
10	**Delhi**	73	1.07	62.64	4	5.5	12	16.4	18	24.7	20	27.4	13	17.8	6	8.2
11	**Goa**	64	1.75	14.95	3	4.7	28	43.8	24	37.5	9	14.1	0	0.0	0	0.0
12	**Gujarat**	699	0.00	59.90	9	1.3	110	15.7	239	34.2	243	34.8	92	13.2	6	0.9

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of Pre Monsoon-2019

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (m bgl)		Number & Percentage of Wells Showing Depth to Water Level (m bgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
13	**Haryana**	288	0.48	87.11	11	3.8	64	22.2	67	23.3	75	26.0	59	20.5	12	4.2
14	**Himachal Pradesh**	101	0.62	28.70	15	14.9	39	38.6	21	20.8	20	19.8	6	5.9	0	0.0
15	**Jammu & Kashmir**	204	0.85	38.70	28	13.7	102	50.0	51	25.0	15	7.4	8	3.9	0	0.0
16	**Jharkhand**	278	0.00	16.25	5	1.8	35	12.6	179	64.4	59	21.2	0	0.0	0	0.0
17	**Karnataka**	1102	1.15	27.30	33	3.0	235	21.3	510	46.3	318	28.9	6	0.5	0	0.0
18	**Kerala**	1441	0.31	55.23	88	6.1	411	28.5	633	43.9	283	19.6	25	1.7	1	0.1
19	**Madhya Pradesh**	1319	0.00	49.62	16	1.2	171	13.0	606	45.9	462	35.0	60	4.5	4	0.3
20	**Maharashtra**	1680	0.01	51.00	40	2.4	176	10.5	751	44.7	617	36.7	88	5.2	8	0.5
21	**Meghalaya**	56	0.51	31.90	8	14.3	29	51.8	15	26.8	1	1.8	2	3.6	1	1.8
22	**Nagaland**	5	1.15	11.62	1	20.0	2	40.0	0	0.0	2	40.0	0	0.0	0	0.0
23	**Odisha**	1067	0.00	13.55	140	13.1	467	43.8	437	41.0	23	2.2	0	0.0	0	0.0
24	**Pondicherry**	6	2.51	6.90	0	0.0	5	83.3	1	16.7	0	0.0	0	0.0	0	0.0

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of Pre Monsoon-2019

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (m bgl)		Number & Percentage of Wells Showing Depth to Water Level (m bgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
25	**Punjab**	251	0.70	43.43	6	2.4	45	17.9	56	22.3	76	30.3	64	25.5	4	1.6
26	**Rajasthan**	922	0.52	128.15	13	1.4	75	8.1	201	21.8	263	28.5	195	21.1	175	19.0
27	**Tamil Nadu**	630	0.60	103.40	26	4.1	119	18.9	267	42.4	177	28.1	32	5.1	9	1.4
28	**Telangana**	560	0.85	99.50	7	1.3	83	14.8	202	36.1	189	33.8	66	11.8	13	2.3
29	**Tripura**	96	0.45	27.25	20	20.8	50	52.1	18	18.8	5	5.2	3	3.1	0	0.0
30	**Uttar Pradesh**	593	0.29	44.20	9	1.5	174	29.3	272	45.9	113	19.1	23	3.9	2	0.3
31	**Uttarakhand**	44	1.98	71.90	1	2.3	13	29.5	11	25.0	16	36.4	1	2.3	2	4.5
32	**West Bengal**	681	0.32	36.82	64	9.4	209	30.7	266	39.1	120	17.6	22	3.2	0	0.0
	Total	**14555**	**0.00**	**128.15**	**751**	**5.2**	**3433**	**23.6**	**5933**	**40.8**	**3402**	**23.4**	**786**	**5.4**	**250**	**1.7**

Annexure-II

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of August-2019

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (mbgl)		Number & Percentage of Wells Showing Depth to Water Level (mbgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
1	**Andhra Pradesh**	722	0.00	58.40	188	26.0	217	30.1	207	28.7	96	13.3	10	1.4	4	0.6
2	**Arunachal Pradesh**	10	0.62	4.83	4	40.0	6	60.0	0	0.0	0	0.0	0	0.0	0	0.0
3	**Assam**	166	0.04	16.84	99	59.6	54	32.5	10	6.0	3	1.8	0	0.0	0	0.0
4	**Bihar**	599	0.04	14.00	148	24.7	287	47.9	153	25.5	11	1.8	0	0.0	0	0.0
5	**Chandigarh**	14	2.42	41.91	0	0.0	3	21.4	2	14.3	2	14.3	6	42.9	1	7.1
6	**Chhattisgarh**	473	0.55	19.22	135	28.5	248	52.4	71	15.0	19	4.0	0	0.0	0	0.0
7	**Dadra & Nagar Haveli**	17	0.01	8.00	13	76.5	2	11.8	2	11.8	0	0.0	0	0.0	0	0.0
8	**Daman & Diu**	3	4.21	6.21	0	0.0	1	33.3	2	66.7	0	0.0	0	0.0	0	0.0
9	**Delhi**	82	0.30	62.27	11	13.4	6	7.3	20	24.4	24	29.3	14	17.1	7	8.5
10	**Goa**	62	0.48	11.44	24	38.7	22	35.5	14	22.6	2	3.2	0	0.0	0	0.0

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of August-2019

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (mbgl)		Number & Percentage of Wells Showing Depth to Water Level (mbgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
11	**Gujarat**	670	0.00	47.82	150	22.4	208	31.0	153	22.8	100	14.9	56	8.4	3	0.4
12	**Haryana**	269	0.26	88.42	31	11.5	49	18.2	59	21.9	61	22.7	58	21.6	11	4.1
13	**Himachal Pradesh**	95	0.08	30.31	36	37.9	32	33.7	9	9.5	15	15.8	3	3.2	0	0.0
14	**Jammu & Kashmir**	196	0.41	34.83	59	30.1	94	48.0	27	13.8	7	3.6	9	4.6	0	0.0
15	**Jharkhand**	288	0.00	13.00	83	28.8	117	40.6	74	25.7	14	4.9	0	0.0	0	0.0
16	**Karnataka**	1347	0.01	30.70	366	27.2	462	34.3	342	25.4	163	12.1	14	1.0	0	0.0
17	**Kerala**	1419	0.01	36.55	460	32.4	518	36.5	359	25.3	71	5.0	11	0.8	0	0.0
18	**Madhya Pradesh**	1259	0.00	65.11	570	45.3	329	26.1	250	19.9	96	7.6	12	1.0	2	0.2
19	**Maharashtra**	1647	0.01	50.10	582	35.3	459	27.9	367	22.3	197	12.0	36	2.2	6	0.4
20	**Meghalaya**	24	0.28	5.00	11	45.8	13	54.2	0	0.0	0	0.0	0	0.0	0	0.0
21	**Nagaland**	3	0.98	2.80	1	33.3	2	66.7	0	0.0	0	0.0	0	0.0	0	0.0

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of August-2019

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (mbgl)		Number & Percentage of Wells Showing Depth to Water Level (mbgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
22	**Odisha**	1260	0.02	10.70	932	74.0	279	22.1	47	3.7	2	0.2	0	0.0	0	0.0
23	**Pondicherry**	6	1.95	7.00	1	16.7	3	50.0	2	33.3	0	0.0	0	0.0	0	0.0
24	**Punjab**	231	0.70	46.35	11	4.8	43	18.6	49	21.2	61	26.4	59	25.5	8	3.5
25	**Rajasthan**	999	0.03	115.00	152	15.2	133	13.3	168	16.8	182	18.2	169	16.9	195	19.5
26	**Tamil Nadu**	649	0.00	98.28	29	4.5	114	17.6	274	42.2	181	27.9	42	6.5	9	1.4
27	**Telangana**	563	0.00	67.30	103	18.3	150	26.6	147	26.1	112	19.9	44	7.8	7	1.2
28	**Tripura**	21	0.35	5.58	9	42.9	11	52.4	1	4.8	0	0.0	0	0.0	0	0.0
29	**Uttar Pradesh**	696	0.00	46.25	171	24.6	200	28.7	178	25.6	115	16.5	29	4.2	3	0.4
30	**Uttaranchal**	39	0.56	68.48	6	15.4	11	28.2	12	30.8	7	17.9	2	5.1	1	2.6
31	**West Bengal**	721	0.00	32.70	207	28.7	234	32.5	155	21.5	100	13.9	25	3.5	0	0.0
	Total	**14550**	**0.00**	**115.00**	**4592**	**31.6**	**4307**	**29.6**	**3154**	**21.7**	**1641**	**11.3**	**599**	**4.1**	**257**	**1.8**

Annexure-III

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of November-2019

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (m bgl)		Number & Percentage of Wells Showing Depth to Water Level (m bgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
1	**Andaman & Nicobar Islands**	90	0.36	10.04	59	65.56	29	32.22	1	1.1	1	1.11	0	0.00	0	0.00
2	**Andhra Pradesh**	708	0.00	58.04	343	48.45	203	28.67	103	14.5	48	6.78	9	1.27	2	0.28
3	**Arunachal Pradesh**	8	2.10	7.43	0	0.00	6	75.00	2	25.00	0	0.00	0	0.00	0	0.00
4	**Assam**	119	0.00	18.32	56	47.06	51	42.86	10	8.40	2	1.68	0	0.00	0	0.00
5	**Bihar**	628	0.02	14.00	182	28.98	340	54.14	101	16.08	5	0.80	0	0.00	0	0.00
6	**Chandigarh**	8	2.87	18.97	0	0.00	2	25.00	2	25.00	4	50.00	0	0.00	0	0.00
7	**Chhattisgarh**	569	0.48	21.35	74	13.01	361	63.44	115	20.21	18	3.16	1	0.18	0	0.00
8	**Dadra & Nagar Haveli**	17	1.03	7.60	6	35.29	10	58.82	1	5.88	0	0.00	0	0.00	0	0.00
9	**Daman & Diu**	9	3.92	6.08	3	33.33	5	55.56	1	11.11	0	0.00	0	0.00	0	0.00
10	**Delhi**	85	0.30	63.15	7	8.24	13	15.29	20	23.53	23	27.06	15	17.65	7	8.24

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of November-2019

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (m bgl)		Number & Percentage of Wells Showing Depth to Water Level (m bgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
11	**Goa**	69	0.04	14.67	17	24.64	31	44.93	17	24.64	4	5.80	0	0.00	0	0.00
12	**Gujarat**	811	0.08	50.62	224	27.62	311	38.35	178	21.95	65	8.01	31	3.82	2	0.25
13	**Haryana**	288	0.57	77.00	32	11.11	55	19.10	69	23.96	61	21.18	60	20.83	11	3.82
14	**Himachal Pradesh**	103	0.38	30.43	29	28.16	35	33.98	22	21.36	14	13.59	3	2.91	0	0.00
15	**Jammu & Kashmir**	204	0.10	28.26	72	35.29	87	42.65	32	15.69	7	3.43	6	2.94	0	0.00
16	**Jharkhand**	274	0.35	15.00	74	27.01	153	55.84	42	15.33	5	1.82	0	0.00	0	0.00
17	**Karnataka**	1231	0.00	30.70	402	32.66	435	35.34	328	26.65	61	4.96	5	0.41	0	0.00
18	**Kerala**	1428	0.08	34.33	312	21.85	476	33.33	534	37.39	99	6.93	7	0.49	0	0.00
19	**Madhya Pradesh**	1364	0.00	37.14	339	24.85	609	44.65	319	23.39	80	5.87	17	1.25	0	0.00
20	**Maharashtra**	1644	0.01	53.20	502	30.54	687	41.79	339	20.62	84	5.11	31	1.89	1	0.06
21	**Meghalaya**	13	0.15	4.90	6	46.15	7	53.85	0	0.00	0	0.00	0	0.00	0	0.00

State-wise Depth to water Level and Distribution of Percentage of Wells for the Period of November-2019

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (m bgl)		Number & Percentage of Wells Showing Depth to Water Level (m bgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
22	**Nagaland**	3	1.32	6.60	1	33.33	1	33.33	1	33.33	0	0.00	0	0.00	0	0.00
23	**Odisha**	1238	0.01	12.00	521	42.08	605	48.87	108	8.72	4	0.32	0	0.00	0	0.00
24	**Pondicherry**	4	1.31	2.85	3	75.00	1	25.00	0	0.00	0	0.00	0	0.00	0	0.00
25	**Punjab**	222	0.59	44.80	9	4.05	51	22.97	41	18.47	53	23.87	65	29.28	3	1.35
26	**Rajasthan**	1023	0.10	121.28	123	12.02	200	19.55	179	17.50	158	15.44	170	16.62	193	18.87
27	**Tamil Nadu**	655	0.00	105.36	177	27.02	188	28.70	190	29.01	75	11.45	18	2.75	7	1.07
28	**Telangana**	565	0.00	69.35	178	31.50	165	29.20	114	20.18	83	14.69	22	3.89	3	0.53
29	**Tripura**	21	0.55	6.38	8	38.10	12	57.14	1	4.76	0	0.00	0	0.00	0	0.00
30	**Uttar Pradesh**	660	0.02	44.05	149	22.58	249	37.73	136	20.61	100	15.15	24	3.64	2	0.30
31	**Uttarakhand**	49	1.38	61.81	7	14.29	10	20.41	15	30.61	10	20.41	4	8.16	3	6.12
32	**West Bengal**	717	0.00	32.61	162	22.59	323	45.05	130	18.13	78	10.88	24	3.35	0	0.00
	Total	**14827**	**0.00**	**121.28**	**4077**	**27.50**	**5711**	**38.52**	**3151**	**21.25**	**1142**	**7.70**	**512**	**3.45**	**234**	**1.6**

Annexure – IV

State-wise Depth to water Level Distribution and Percentage of Wells for the Period of January-2020

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (m bgl)		Number & Percentage of Wells Showing Depth to Water Level (m bgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
1	**Andhra Pradesh**	710	0.00	58.40	232	32.68	289	40.70	130	18.3	48	6.76	8	1.13	3	0.42
2	**Arunachal Pradesh**	9	2.28	9.94	0	0.00	5	55.56	4	44.44	0	0.00	0	0.00	0	0.00
3	**Assam**	154	0.04	19.17	53	34.42	77	50.00	21	13.64	3	1.95	0	0.00	0	0.00
4	**Bihar**	650	0.32	15.80	72	11.08	397	61.08	168	25.85	13	2.00	0	0.00	0	0.00
5	**Chandigarh**	13	2.68	59.14	0	0.00	3	23.08	2	15.38	2	15.38	3	23.08	3	23.08
6	**Chhattisgarh**	541	0.80	23.44	24	4.44	249	46.03	230	42.51	35	6.47	3	0.55	0	0.00
7	**Dadra & Nagar Haveli**	17	2.07	8.85	0	0.00	14	82.35	3	17.65	0	0.00	0	0.00	0	0.00
8	**Daman & Diu**	10	2.10	7.10	0	0.00	7	70.00	3	30.00	0	0.00	0	0.00	0	0.00
9	**Delhi**	86	0.80	63.13	8	9.30	15	17.44	22	25.58	21	24.42	13	15.12	7	8.14
10	**Goa**	71	0.76	14.86	11	15.49	33	46.48	21	29.58	6	8.45	0	0.00	0	0.00

State-wise Depth to water Level Distribution and Percentage of Wells for the Period of January-2020

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (m bgl)		Number & Percentage of Wells Showing Depth to Water Level (m bgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
11	**Gujarat**	795	0.00	52.48	103	12.96	285	35.85	241	30.31	120	15.09	44	5.53	2	0.25
12	**Haryana**	224	0.64	94.77	19	8.48	47	20.98	45	20.09	59	26.34	42	18.75	12	5.36
13	**Himachal Pradesh**	100	0.34	30.14	26	26.00	32	32.00	21	21.00	18	18.00	3	3.00	0	0.00
14	**Jammu & Kashmir**	226	0.11	31.35	89	39.38	90	39.82	29	12.83	12	5.31	6	2.65	0	0.00
15	**Jharkhand**	278	0.00	14.10	25	8.99	134	48.20	112	40.29	7	2.52	0	0.00	0	0.00
16	**Karnataka**	1048	0.00	31.00	64	6.11	413	39.41	421	40.17	144	13.74	6	0.57	0	0.00
17	**Kerala**	1426	0.30	34.90	168	11.78	443	31.07	628	44.04	171	11.99	16	1.12	0	0.00
18	**Madhya Pradesh**	1325	0.00	42.10	122	9.21	504	38.04	517	39.02	161	12.15	20	1.51	1	0.08
19	**Maharashtra**	1708	0.01	53.40	201	11.77	724	42.39	593	34.72	161	9.43	27	1.58	2	0.12
20	**Meghalaya**	24	0.53	5.38	4	16.67	18	75.00	2	8.33	0	0.00	0	0.00	0	0.00
21	**Nagaland**	2	2.43	5.17	0	0.00	1	50.00	1	50.00	0	0.00	0	0.00	0	0.00
22	**Odisha**	1269	0.00	11.85	306	24.11	754	59.42	202	15.92	7	0.55	0	0.00	0	0.00

State-wise Depth to water Level Distribution and Percentage of Wells for the Period of January-2020

S. No.	Name of State	No. of wells Analysed	Depth to Water Level (m bgl)		Number & Percentage of Wells Showing Depth to Water Level (m bgl) in the Range of											
					0-2		2-5		5-10		10-20		20-40		> 40	
			Min	Max	No	%	No	%	No	%	No	%	No	%	No	%
23	**Pondicherry**	6	1.60	4.90	2	33.33	4	66.67	0	0.00	0	0.00	0	0.00	0	0.00
24	**Punjab**	223	0.25	49.14	13	5.83	44	19.73	47	21.08	60	26.91	55	24.66	4	1.79
25	**Rajasthan**	1001	0.04	121.60	91	9.09	189	18.88	207	20.68	158	15.78	160	15.98	196	19.58
26	**Tamil Nadu**	649	0.00	51.02	135	20.80	214	32.97	195	30.05	81	12.48	18	2.77	6	0.92
27	**Telangana**	565	0.00	60.17	61	10.80	206	36.46	172	30.44	92	16.28	30	5.31	4	0.71
28	**Tripura**	22	0.60	7.00	7	31.82	11	50.00	4	18.18	0	0.00	0	0.00	0	0.00
29	**Uttar Pradesh**	710	0.17	43.70	96	13.52	320	45.07	163	22.96	104	14.65	24	3.38	3	0.42
30	**Uttarakhand**	42	0.61	61.08	6	14.29	14	33.33	9	21.43	8	19.05	2	4.76	3	7.14
31	**West Bengal**	745	0.35	29.21	71	9.53	345	46.31	192	25.77	104	13.96	33	4.43	0	0.00
Total		**14649**	**0.00**	**121.60**	**2009**	**13.71**	**5881**	**40.15**	**4405**	**30.07**	**1595**	**10.89**	**513**	**3.50**	**246**	**1.7**

Annexure – V

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from Premonsoon 2019 to Premonsoon 2018

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Rise		Fall	
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	**Andaman & Nicobar**	101	34	33.7	3	3.0	0	0.0	53	52.5	5	5.0	5	5.0	37	37	63	62
2	**Andhra Pradesh**	690	164	23.8	26	3.8	11	1.6	283	41.0	70	10.1	50	7.2	201	29	403	58
3	**Arunachal Pradesh**	16	6	37.5	5	31.3	2	12.5	3	18.8	0	0.0	0	0.0	13	81	3	19
4	**Assam**	194	57	29.4	3	1.5	1	0.5	108	55.7	17	8.8	8	4.1	61	31	133	69
5	**Bihar**	561	167	29.8	18	3.2	6	1.1	269	48.0	38	6.8	22	3.9	191	34	329	59
6	**Chandigarh**	8	5	62.5	0	0.0	0	0.0	3	37.5	0	0.0	0	0.0	5	63	3	38
7	**Chhattisgarh**	570	164	28.8	54	9.5	45	7.9	168	29.5	60	10.5	34	6.0	263	46	262	46
8	**Dadra & Nagar Haveli**	17	2	11.8	1	5.9	0	0.0	8	47.1	0	0.0	6	35.3	3	18	14	82
9	**Daman & Diu**	8	4	50.0	1	12.5	1	12.5	2	25.0	0	0.0	0	0.0	6	75	2	25

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Rise		Fall	
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
10	**Delhi**	67	34	50.7	11	16.4	3	4.5	18	26.9	1	1.5	0	0.0	48	72	19	28
11	**Goa**	60	13	21.7	0	0.0	1	1.7	42	70.0	2	3.3	1	1.7	14	23	45	75
12	**Gujarat**	612	139	22.7	48	7.8	31	5.1	245	40.0	81	13.2	60	9.8	218	36	386	63
13	**Haryana**	224	107	47.8	7	9.0	5	2.0	83	37.1	9	18.0	12	2.0	119	53	104	46
14	**Himachal Pradesh**	101	70	69.3	10	9.9	7	6.9	6	5.9	0	0.0	7	6.9	87	86	13	13
15	**Jammu & Kashmir**	197	102	51.8	26	13.2	11	5.6	49	24.9	4	2.0	4	2.0	139	71	57	29
16	**Jharkhand**	231	58	25.1	10	4.3	3	1.3	118	51.1	27	11.7	10	4.3	71	31	155	67
17	**Karnataka**	1055	106	10.0	28	2.7	19	1.8	494	46.8	277	26.3	129	12.2	153	15	900	85
18	**Kerala**	1364	453	33.2	40	2.9	12	0.9	783	57.4	34	2.5	15	1.1	505	37	832	61
19	**Madhya Pradesh**	1272	472	37.1	104	8.2	102	8.0	380	29.9	95	7.5	73	5.7	678	53	548	43
20	**Maharashtra**	1574	337	21.4	78	5.0	40	2.5	567	36.0	244	15.5	244	15.5	455	29	1055	67
21	**Meghalaya**	52	7	13.5	0	0.0	0	0.0	44	84.6	1	1.9	0	0.0	7	13	45	87

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Rise		Fall	
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
22	**Odisha**	995	512	51.5	57	5.7	23	2.3	329	33.1	46	4.6	10	1.0	592	59	385	39
23	**Pondicherry**	5	1	20.0	0	0.0	0	0.0	4	80.0	0	0.0	0	0.0	1	20	4	80
24	**Punjab**	194	93	47.9	11	5.7	8	4.1	63	32.5	9	4.6	10	5.2	112	58	82	42
25	**Rajasthan**	859	157	18.3	38	4.4	35	4.1	397	46.2	102	11.9	119	13.9	230	27	618	72
26	**Tamil Nadu**	455	92	20.2	27	5.9	23	5.1	173	38.0	75	16.5	58	12.7	142	31	306	67
27	**Telangana**	534	117	21.9	11	2.1	10	1.9	176	33.0	81	15.2	95	17.8	138	26	352	66
28	**Tripura**	71	20	28.2	1	1.4	0	0.0	48	67.6	2	2.8	0	0.0	21	30	50	70
29	**Uttar Pradesh**	506	266	52.6	14	2.8	7	1.4	196	38.7	16	3.2	1	0.2	287	57	213	42
30	**Uttarakhand**	32	11	34.4	1	3.1	4	12.5	12	37.5	1	3.1	3	9.4	16	50	16	50
31	**West Bengal**	470	173	36.8	28	6.0	12	2.6	198	42.1	36	7.7	21	4.5	213	45	255	54
	Total	**13095**	**3943**	**30**	**661**	**5.0**	**422**	**3.2**	**5322**	**40.6**	**1333**	**10.2**	**997**	**7.6**	**5026**	**38**	**7652**	**58**

417 monitoring wells (3%) show no change in Water Level.

Annexure – VI

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from August 2019 to August 2018

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Total			
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	**Andhra Pradesh**	681	0.01	9.66	0.01	11.0	137	20.1	17	2.5	13	1.9	308	45.2	87	12.8	58	8.5	167	25	453	67
2	**Arunachal Pradesh**	10	0.02	3.33	2.15	2.2	7	70.0	2	20.0	0	0.0	0	0.0	1	10.0	0	0.0	9	90	1	10
3	**Assam**	139	0.02	3.53	0.01	6.6	51	36.7	2	1.4	0	0.0	74	53.2	5	3.6	4	2.9	53	38	83	60
4	**Bihar**	570	0.01	6.04	0.01	8.0	178	31.2	28	4.9	9	1.6	279	48.9	53	9.3	20	3.5	215	38	352	62
5	**Chandigarh**	10	0.02	3.61	0.02	3.7	3	30.0	1	10.0	0	0.0	5	50.0	1	10.0	0	0.0	4	40	6	60
6	**Chhattisgarh**	378	0.01	8.00	0.01	13.5	85	22.5	22	5.8	7	1.9	160	42.3	61	16.1	40	10.6	114	30	261	69
7	**Dadra & Nagar Haveli**	17	0.40	8.20	0.10	0.6	10	58.8	2	11.8	1	5.9	4	23.5	0	0.0	0	0.0	13	76	4	24
8	**Daman & Diu**	2			0.17	0.3	0	0.0	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0	2	100
9	**Delhi**	71	0.04	4.62	0.03	8.1	32	45.1	1	1.4	1	1.4	31	43.7	3	4.2	2	2.8	34	48	36	51
10	**Goa**	60	0.07	3.59	0.02	2.2	14	23.3	2	3.3	0	0.0	42	70.0	1	1.7	0	0.0	16	27	43	72
11	**Gujarat**	553	0.02	12.52	0.01	16.52	201	36.3	67	12.1	49	8.9	138	25.0	38	6.9	57	10.3	317	57	233	42
12	**Haryana**	220	0.01	8.28	0.01	8.6	103	46.8	12	5.5	6	2.7	83	37.7	11	5.0	4	1.8	121	55	98	45

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from August 2019 to August 2018

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Total			
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
13	**Himachal Pradesh**	95	0.01	7.36	0.02	12.2	35	36.8	7	7.4	6	6.3	33	34.7	8	8.4	4	4.2	48	51	45	47
14	**Jammu & Kashmir**	120	0.01	2.10	0.02	8.8	15	12.5	1	0.8	0	0.0	92	76.7	9	7.5	3	2.5	16	13	104	87
15	**Jharkhand**	237	0.01	6.31	0.02	10.2	67	28.3	13	5.5	3	1.3	102	43.0	38	16.0	14	5.9	83	35	154	65
16	**Karnataka**	1227	0.01	16.60	0.01	13.1	497	40.5	79	6.4	49	4.0	362	29.5	101	8.2	68	5.5	625	51	531	43
17	**Kerala**	1328	0.01	10.24	0.01	13.4	851	64.1	184	13.9	28	2.1	190	14.3	46	3.5	22	1.7	1063	80	258	19
18	**Madhya Pradesh**	1204	0.01	16.88	0.01	13.7	460	38.2	169	14.0	141	11.7	309	25.7	58	4.8	50	4.2	770	64	417	35
19	**Maharashtra**	1532	0.01	12.00	0.01	17.4	551	36.0	136	8.9	83	5.4	451	29.4	130	8.5	135	8.8	770	50	716	47
20	**Meghalaya**	21	0.04	0.54	0.01	1.5	6	28.6	0	0.0	0	0.0	12	57.1	0	0.0	0	0.0	6	29	12	57
21	**Odisha**	1168	0.01	6.2	0.01	7.4	506	43.3	32	2.7	8	0.7	556	47.6	30	2.6	8	0.7	546	47	594	51
22	**Pondicherry**	4	0.09	1.25	1.3	1.3	3	75.0	0	0.0	0	0.0	1	25.0	0	0.0	0	0.0	3	75	1	25
23	**Punjab**	190	0.02	12.85	0.02	15.1	75	39.5	18	9.5	6	3.2	74	38.9	12	6.3	4	2.1	99	52	90	47
24	**Rajasthan**	942	0.03	15.62	0.01	16.4	298	31.6	87	9.2	95	10.1	268	28.5	79	8.4	99	10.5	480	51	446	47

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from August 2019 to August 2018

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Total			
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
25	**Tamil Nadu**	442	0.01	18.02	0.02	11.9	114	25.8	21	4.8	25	5.7	163	36.9	58	13.1	55	12.4	160	36	276	62
26	**Telangana**	526	0.01	12.70	0.02	16.8	115	21.9	34	6.5	24	4.6	211	40.1	71	13.5	60	11.4	173	33	342	65
27	**Tripura**	18	0.03	5.56	0.87	1.8	6	33.3	0	0.0	1	5.6	11	61.1	0	0.0	0	0.0	7	39	11	61
28	**Uttar Pradesh**	620	0.01	8.21	0.02	7.2	172	27.7	28	4.5	8	1.3	327	52.7	61	9.8	21	3.4	208	34	409	66
29	**Uttarakhand**	36	0.26	11.59	0.10	5.7	6	16.7	2	5.6	3	8.3	17	47.2	3	8.3	3	8.3	11	31	23	64
30	**West Bengal**	473	0.01	11.01	0.02	18.6	112	23.7	16	3.4	12	2.5	234	49.5	50	10.6	44	9.3	140	30	328	69
	TOTAL	**12894**					**4710**	**36.5**	**983**	**7.6**	**578**	**4.5**	**4539**	**35.2**	**1015**	**7.9**	**775**	**6.0**	**6271**	**49**	**6329**	**49**

294 monitoring wells (2%) show no change in Water Level.

Annexure – VII

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from November 2019 to November 2018

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Total			
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	Andaman & Nicobar	87	0.08	1.03	0.02	3.6	6	6.9	0	0.0	0	0.0	70	80.5	10	11.5	0	0.0	6	7	80	92
2	Andhra Pradesh	690	0.01	16.41	0.02	10.8	399	57.8	110	15.9	66	9.6	60	8.7	6	0.9	14	2.0	575	83	80	12
3	Arunachal Pradesh	8	0.03	1.25	1.21	1.2	7	87.5	0	0.0	0	0.0	1	12.5	0	0.0	0	0.0	7	88	1	13
4	Assam	116	0.01	15.06	0.01	1.6	58	50.0	3	2.6	1	0.9	52	44.8	0	0.0	0	0.0	62	53	52	45
5	Bihar	576	0.01	8.73	0.02	6.8	338	58.7	97	16.8	28	4.9	90	15.6	17	3.0	4	0.7	463	80	111	19
6	Chandigarh	6	10.40	10.40	0.05	12.9	0	0.0	0	0.0	1	16.7	4	66.7	0	0.0	1	16.7	1	17	5	83
7	Chhattisgarh	443	0.02	16.58	0.01	14.7	221	49.9	78	17.6	19	4.3	100	22.6	17	3.8	6	1.4	318	72	123	28
8	Dadra & Nagar Haveli	17	0.34	5.98	0.69	1.0	9	52.9	3	17.6	3	17.6	2	11.8	0	0.0	0	0.0	15	88	2	12
9	Daman & Diu	8			0.05	1.6	0	0.0	0	0.0	0	0.0	8	100.0	0	0.0	0	0.0	0	0	8	100

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from November 2019 to November 2018

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Total			
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
10	**Delhi**	76	0.01	14.87	0.02	7.5	48	63.2	5	6.6	4	5.3	14	18.4	4	5.3	1	1.3	57	75	19	25
11	**Goa**	30	0.07	7.63	0.09	6.3	17	56.7	7	23.3	2	6.7	3	10.0	0	0.0	1	3.3	26	87	4	13
12	**Gujarat**	707	0.02	17.60	0.01	11.2	233	33.0	113	16.0	207	29.3	109	15.4	28	4.0	15	2.1	553	78	152	21
13	**Haryana**	234	0.01	13.88	0.01	15.8	61	26.1	9	3.8	14	6.0	122	52.1	16	6.8	10	4.3	84	36	148	63
14	**Himachal Pradesh**	105	0.01	6.41	0.02	11.3	38	36.2	1	1.0	1	1.0	57	54.3	2	1.9	2	1.9	40	38	61	58
15	**Jammu & Kashmir**	116	0.07	6.15	0.03	2.1	83	71.6	5	4.3	1	0.9	26	22.4	1	0.9	0	0.0	89	77	27	23
16	**Jharkhand**	247	0.01	10.00	0.01	2.0	138	55.9	62	25.1	17	6.9	29	11.7	0	0.0	0	0.0	217	88	29	12
17	**Karnataka**	1160	0.01	19.07	0.01	16.8	514	44.3	220	19.0	157	13.5	183	15.8	40	3.4	22	1.9	891	77	245	21
18	**Kerala**	1375	0.01	11.33	0.01	8.9	975	70.9	92	6.7	23	1.7	252	18.3	12	0.9	5	0.4	1090	79	269	20
19	**Madhya Pradesh**	1282	0.01	18.08	0.01	15.6	468	36.5	309	24.1	354	27.6	104	8.1	20	1.6	18	1.4	1131	88	142	11
20	**Maharashtra**	1535	0.02	19.30	0.01	14.3	591	38.5	343	22.3	357	23.3	176	11.5	29	1.9	21	1.4	1291	84	226	15

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from November 2019 to November 2018

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Total			
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
21	Meghalaya	12	0.03	1.25	0.03	1.5	6	50.0	0	0.0	0	0.0	6	50.0	0	0.0	0	0.0	6	50	6	50
22	Nagaland	2			3.01	3.3	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0	0	0.0	0	0	2	100
23	Odisha	1172	0.01	7.3	0.01	7.5	664	56.7	71	6.1	16	1.4	372	31.7	27	2.3	5	0.4	751	64	404	34
24	Pondicherry	4	0.05	0.43	0.25	3.0	3	0.0	0	0.0	0	1.0	1	0.0	0	0.0	0	0.0	3	75	1	25
25	Punjab	199	0.02	12.16	0.01	4.1	68	34.2	12	6.0	5	2.5	96	48.2	15	7.5	1	0.5	85	43	112	56
26	Rajasthan	968	0.01	19.78	0.02	15.8	279	28.8	160	16.5	175	18.1	234	24.2	52	5.4	57	5.9	614	63	343	35
27	Tamil Nadu	491	0.04	16.05	0.02	19.0	190	38.7	84	17.1	69	14.1	95	19.3	26	5.3	25	5.1	343	70	146	30
28	Telangana	530	0.04	13.20	0.03	10.6	192	36.2	123	23.2	143	27.0	51	9.6	9	1.7	10	1.9	458	86	70	13
29	Tripura	18	0.01	0.62	0.03	1.2	7	38.9	0	0.0	0	0.0	11	61.1	0	0.0	0	0.0	7	39	11	61
30	Uttar Pradesh	599	0.01	10.50	0.01	9.9	272	45.4	56	9.3	19	3.2	231	38.6	12	2.0	3	0.5	347	58	246	41
31	Uttaranchal	45	0.03	3.27	0.08	8.4	8	17.8	1	2.2	0	0.0	21	46.7	7	15.6	8	17.8	9	20	36	80
32	West Bengal	552	0.01	10.27	0.01	18.9	295	53.4	53	9.6	29	5.3	139	25.2	16	2.9	17	3.1	377	68	172	31

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from November 2019 to November 2018

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Total			
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
	TOTAL	13410					6188	46	2017	15.0	1711	12.8	2719	20.3	368	2.7	246	1.8	9916	74	3333	25

161 monitoring wells (1%) show no change in Water Level.

Annexure – VIII

State-wise Annual Fluctuation & Frequency Distribution of Different Ranges from January 2020 to January 2019

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Rise		Fall	
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	**Andhra Pradesh**	689	320	46.4	78	11.3	68	9.9	180	26.1	7	1.0	9	1.3	466	68	196	28
2	**Arunachal Pradesh**	9	4	44.4	0	0.0	0	0.0	5	55.6	0	0.0	0	0.0	4	44	5	56
3	**Assam**	135	74	54.8	4	3.0	0	0.0	47	34.8	5	3.7	2	1.5	78	58	54	40
4	**Bihar**	580	356	61.4	92	15.9	17	2.9	80	13.8	18	3.1	10	1.7	465	80	108	19
5	**Chandigarh**	11	3	27.3	0	0.0	0	0.0	2	18.2	3	27.3	3	27.3	3	27	8	73
6	**Chhattisgarh**	418	191	45.7	52	12.4	15	3.6	113	27.0	30	7.2	14	3.3	258	62	157	38
7	**Dadra & Nagar Haveli**	15	6	40.0	3	20.0	3	20.0	3	20.0	0	0.0	0	0.0	12	80	3	20
8	**Daman & Diu**	9	5	55.6	2	22.2	0	0.0	2	22.2	0	0.0	0	0.0	7	78	2	22
9	**Delhi**	75	42	56.0	5	6.7	2	2.7	23	30.7	3	4.0	0	0.0	49	65	26	35
10	**Goa**	67	47	70.1	6	9.0	1	1.5	11	16.4	1	1.5	0	0.0	54	81	12	18

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Rise		Fall	
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
11	**Gujarat**	687	292	42.5	129	18.8	166	24.2	68	9.9	11	1.6	14	2.0	587	85	93	14
12	**Haryana**	183	58	31.7	3	1.6	7	3.8	93	50.8	11	6.0	9	4.9	68	37	113	62
13	**Himachal Pradesh**	94	65	69.1	3	3.2	3	3.2	22	23.4	1	1.1	0	0.0	71	76	23	24
14	**Jammu & Kashmir**	190	122	64.2	23	12.1	8	4.2	32	16.8	4	2.1	1	0.5	153	81	37	19
15	**Jharkhand**	204	125	61.3	31	15.2	7	3.4	35	17.2	1	0.5	3	1.5	163	80	39	19
16	**Karnataka**	860	249	29.0	62	7.2	59	6.9	393	45.7	59	6.9	36	4.2	370	43	488	57
17	**Kerala**	1374	758	55.2	30	2.2	10	0.7	515	37.5	22	1.6	8	0.6	798	58	545	40
18	**Madhya Pradesh**	1277	560	43.9	325	25.5	203	15.9	118	9.2	28	2.2	26	2.0	1088	85	172	13
19	**Maharashtra**	1623	644	39.7	321	19.8	320	19.7	225	13.9	50	3.1	33	2.0	1285	79	308	19
20	**Meghalaya**	23	14	60.9	0	0.0	0	0.0	8	34.8	1	4.3	0	0.0	14	61	9	39
21	**Odisha**	1194	728	61.0	64	5.4	15	1.3	336	28.1	23	1.9	4	0.3	807	68	363	30
22	**Pondicherr**	6	3	50.0	0	0.0	0	0.0	3	50.0	0	0.0	0	0.0	3	50	3	50

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Rise		Fall	
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
	y																	
23	**Punjab**	197	98	49.7	11	5.6	8	4.1	70	35.5	4	2.0	5	2.5	117	59	79	40
24	**Rajasthan**	946	276	29.2	111	11.7	173	18.3	257	27.2	62	6.6	41	4.3	560	59	360	38
25	**Tamil Nadu**	631	259	41.0	106	16.8	86	13.6	112	17.7	23	3.6	34	5.4	451	71	169	27
26	**Telangana**	538	211	39.2	111	20.6	118	21.9	70	13.0	16	3.0	6	1.1	440	82	92	17
27	**Tripura**	20	14	70.0	0	0.0	0	0.0	5	25.0	0	0.0	0	0.0	14	70	5	25
28	**Uttar Pradesh**	638	337	52.8	83	13.0	30	4.7	169	26.5	10	1.6	2	0.3	450	71	181	28
29	**Uttarakhand**	35	14	40.0	4	11.4	5	14.3	5	14.3	3	8.6	4	11.4	23	66	12	34
30	**West Bengal**	567	305	53.8	39	6.9	27	4.8	165	29.1	23	4.1	7	1.2	371	65	195	34
	Total	**13295**	**6180**	**46.5**	**1698**	**12.8**	**1351**	**10.2**	**3167**	**23.8**	**419**	**3.2**	**271**	**2.0**	**9229**	**69.4**	**3857**	**29.0**

209 monitoring wells (2%) show no change in Water Level.

Annexure – IX

State-wise Seasonal Fluctuation & Frequency Distribution of Different Ranges from August 2019 to Premonsoon 2019

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	Andhra Pradesh	695	318	45.8	110	15.8	49	7.1	94	13.5	13	1.9	3	0.4	477	69	110	16
2	Arunachal Pradesh	3	2	66.7	1	33.3	0	0.0	0	0.0	0	0.0	0	0.0	3	100	0	0
3	Assam	108	63	58.3	28	25.9	6	5.6	8	7.4	2	1.9	0	0.0	97	90	10	9
4	Bihar	553	248	44.8	151	27.3	103	18.6	26	4.7	1	0.2	6	1.1	502	91	33	6
5	Chandigarh	13	7	53.8	0	0.0	1	7.7	5	38.5	0	0.0	0	0.0	8	62	5	38
6	Chhattisgarh	412	62	15.0	132	32.0	205	49.8	6	1.5	3	0.7	3	0.7	399	97	12	3
7	Dadra And Nagar Haveli	17	0	0.0	4	23.5	10	58.8	0	0.0	0	0.0	0	0.0	14	82	0	0
8	Daman & Diu	8	1	12.5	2	25.0	3	37.5	2	25.0	0	0.0	0	0.0	6	75	2	25
9	Delhi	68	40	58.8	1	1.5	2	2.9	22	32.4	0	0.0	2	2.9	43	63	24	35
10	Goa	54	19	35.2	18	33.3	14	25.9	2	3.7	0	0.0	1	1.9	51	94	3	6
11	Gujarat	650	137	21.1	144	22.2	345	53.1	13	2.0	3	0.5	0	0.0	626	96	16	2
12	Haryana	236	117	49.6	17	7.2	3	1.3	72	30.5	13	5.5	13	5.5	137	58	98	42

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
13	Himachal Pradesh	90	44	48.9	25	27.8	19	21.1	1	1.1	1	1.1	0	0.0	88	98	2	2
14	Jammu and Kashmir	176	96	54.5	35	19.9	14	8.0	25	14.2	3	1.7	0	0.0	145	82	28	16
15	Jharkhand	260	54	20.8	86	33.1	113	43.5	3	1.2	0	0.0	0	0.0	253	97	3	1
16	Karnataka	1046	272	26.0	241	23.0	440	42.1	58	5.5	18	1.7	10	1.0	953	91	86	8
17	Kerala	1366	435	31.8	487	35.7	408	29.9	33	2.4	2	0.1	0	0.0	1330	97	35	3
18	Madhya Pradesh	1210	149	12.3	237	19.6	777	64.2	40	3.3	4	0.3	3	0.2	1163	96	47	4
19	Maharashtra	1542	236	15.3	351	22.8	880	57.1	56	3.6	13	0.8	6	0.4	1467	95	75	5
20	Meghalaya	19	12	63.2	7	36.8	0	0.0	0	0.0	0	0.0	0	0.0	19	100	0	0
21	Nagaland	1	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100	0	0
22	Orissa	1021	317	31.0	372	36.4	310	30.4	19	1.9	3	0.3	0	0.0	999	98	22	2
23	Pondicherry	6	2	33.3	0	0.0	0	0.0	3	50.0	0	0.0	0	0.0	2	33	3	50
24	Punjab	212	55	25.9	9	4.2	9	4.2	94	44.3	35	16.5	9	4.2	73	34	138	65

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
25	Rajasthan	882	320	36.3	166	18.8	268	30.4	89	10.1	13	1.5	8	0.9	754	85	110	12
26	Tamil Nadu	620	160	25.8	41	6.6	45	7.3	246	39.7	57	9.2	22	3.5	246	40	325	52
27	Telangana	538	126	23.4	158	29.4	189	35.1	37	6.9	4	0.7	6	1.1	473	88	47	9
28	Tripura	18	11	61.1	3	16.7	1	5.6	3	16.7	0	0.0	0	0.0	15	83	3	17
29	Uttar Pradesh	557	227	40.8	190	34.1	72	12.9	61	11.0	3	0.5	2	0.4	489	88	66	12
30	Uttaranchal	33	12	36.4	13	39.4	4	12.1	2	6.1	2	6.1	0	0.0	29	88	4	12
31	West Bengal	512	232	45.3	113	22.1	69	13.5	70	13.7	19	3.7	9	1.8	414	81	98	19
	TOTAL	**12926**	**3774**	**29.2**	**3143**	**24.3**	**4359**	**33.7**	**1090**	**8.4**	**212**	**1.6**	**103**	**0.8**	**11276**	**87**	**1405**	**11**

245 monitoring wells (2%) show no change in Water Level.

Annexure – X

State-wise Seasonal Fluctuation & Frequency Distribution of Different Ranges from November 2019 to Premonsoon 2019

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	Andaman & Nicobar	88	11	12.5	1	1.1	2	2.3	69	78.4	5	5.7	0	0.0	14	16	74	84
2	Andhra Pradesh	693	235	33.9	191	27.6	209	30.2	13	1.9	0	0.0	3	0.4	635	92	16	2
3	Arunachal Pradesh	2	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100	0	0
4	Assam	81	52	64.2	16	19.8	5	6.2	7	8.6	1	1.2	0	0.0	73	90	8	10
5	Bihar	566	163	28.8	205	36.2	171	30.2	16	2.8	1	0.2	1	0.2	539	95	18	3
6	Chandigarh	7	5	71.4	0	0.0	1	14.3	0	0.0	0	0.0	1	14.3	6	86	1	14
7	Chhattisgarh	493	96	19.5	169	34.3	203	41.2	19	3.9	3	0.6	1	0.2	468	95	23	5
8	Dadra & Nagar Haveli	17	1	5.9	4	23.5	12	70.6	0	0.0	0	0.0	0	0.0	17	100	0	0
9	Daman & Diu	8	0	0.0	0	0.0	0	0.0	8	100.0	0	0.0	0	0.0	0	0	8	100
10	Delhi	70	43	61.4	1	1.4	1	1.4	21	30.0	1	1.4	2	2.9	45	64	24	34

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
11	**Goa**	60	34	56.7	13	21.7	10	16.7	2	3.3	0	0.0	1	1.7	57	95	3	5
12	**Gujarat**	676	108	16.0	146	21.6	397	58.7	16	2.4	6	0.9	1	0.1	651	96	23	3
13	**Haryana**	215	100	46.5	14	6.5	12	5.6	68	31.6	10	4.7	11	5.1	126	59	89	41
14	**Himachal Pradesh**	100	69	69.0	18	18.0	9	9.0	4	4.0	0	0.0	0	0.0	96	96	4	4
15	**Jammu & Kashmir**	174	108	62.1	40	23.0	14	8.0	11	6.3	1	0.6	0	0.0	162	93	12	7
16	**Jharkhand**	174	108	62.1	40	23.0	14	8.0	11	6.3	1	0.6	0	0.0	162	93	12	7
17	**Karnataka**	969	165	17.0	284	29.3	481	49.6	25	2.6	7	0.7	7	0.7	930	96	39	4
18	**Kerala**	1365	683	50.0	435	31.9	190	13.9	48	3.5	6	0.4	0	0.0	1308	96	54	4
19	**Madhya Pradesh**	1329	202	15.2	324	24.4	736	55.4	34	2.6	8	0.6	13	1.0	1262	95	55	4
20	**Maharashtra**	1573	168	10.7	305	19.4	1026	65.2	54	3.4	11	0.7	5	0.3	1499	95	70	4
21	**Meghalaya**	13	9	69.2	4	30.8	0	0.0	0	0.0	0	0.0	0	0.0	13	100	0	0
22	**Nagaland**	1	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0	1	100

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
23	**Odisha**	1008	441	43.8	338	33.5	126	12.5	89	8.8	9	0.9	1	0.1	905	90	99	10
24	**Pondicherry**	6	5	0.0	1	0.0	0	1.0	0	0.0	0	0.0	0	0.0	6	100	0	0
25	**Punjab**	193	73	37.8	14	7.3	4	2.1	80	41.5	17	8.8	5	2.6	91	47	102	53
26	**Rajasthan**	883	232	26.3	173	19.6	303	34.3	142	16.1	9	1.0	19	2.2	708	80	170	19
27	**Tamil Nadu**	624	150	24.0	168	26.9	241	38.6	34	5.4	14	2.2	6	1.0	559	90	54	9
28	**Telangana**	527	65	12.3	115	21.8	331	62.8	7	1.3	2	0.4	3	0.6	511	97	12	2
29	**Tripura**	18	14	77.8	1	5.6	0	0.0	2	11.1	1	5.6	0	0.0	15	83	3	17
30	**Uttar Pradesh**	518	211	40.7	153	29.5	92	17.8	53	10.2	4	0.8	4	0.8	456	88	61	12
31	**Uttaranchal**	43	16	37.2	12	27.9	6	14.0	4	9.3	3	7.0	2	4.7	34	79	9	21
32	**West Bengal**	533	212	39.8	140	26.3	89	16.7	70	13.1	10	1.9	12	2.3	441	83	92	17
	TOTAL	**13027**	**3781**	**29**	**3325**	**25.5**	**4685**	**36.0**	**908**	**7.0**	**130**	**1.0**	**98**	**0.8**	**11791**	**91**	**1136**	**9**

100 monitoring wells (1%) show no change in Water Level.

Annexure – XI

State-wise Seasonal Fluctuation & Frequency Distribution of Different Ranges from January 2020 to Premonsoon 2019

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	**Andhra Pradesh**	689	294	42.7	178	25.8	149	21.6	30	4.4	2	0.3	1	0.1	621	90	33	5
2	**Arunachal Pradesh**	3	1	33.3	0	0.0	0	0.0	1	33.3	1	33.3	0	0.0	1	33	2	67
3	**Assam**	100	58	58.0	12	12.0	2	2.0	25	25.0	2	2.0	1	1.0	72	72	28	28
4	**Bihar**	578	236	40.8	190	32.9	85	14.7	45	7.8	6	1.0	3	0.5	511	88	54	9
5	**Chandigarh**	12	6	50.0	0	0.0	0	0.0	2	16.7	0	0.0	4	33.3	6	50	6	50
6	**Chhattisgarh**	403	124	30.8	150	37.2	81	20.1	26	6.5	11	2.7	7	1.7	355	88	44	11
7	**Dadra & Nagar Haveli**	17	2	11.8	4	23.5	11	64.7	0	0.0	0	0.0	0	0.0	17	100	0	0
8	**Daman & Diu**	8	3	37.5	2	25.0	1	12.5	2	25.0	0	0.0	0	0.0	6	75	2	25
9	**Delhi**	70	43	61.4	1	1.4	2	2.9	18	25.7	4	5.7	0	0.0	46	66	22	31
10	**Goa**	62	36	58.1	17	27.4	1	1.6	7	11.3	1	1.6	0	0.0	54	87	8	13

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
11	**Gujarat**	653	158	24.2	146	22.4	297	45.5	34	5.2	7	1.1	5	0.8	601	92	46	7
12	**Haryana**	171	71	41.5	8	4.7	11	6.4	62	36.3	9	5.3	8	4.7	90	53	79	46
13	**Himachal Pradesh**	97	70	72.2	12	12.4	5	5.2	10	10.3	0	0.0	0	0.0	87	90	10	10
14	**Jammu & Kashmir**	192	120	62.5	47	24.5	14	7.3	9	4.7	2	1.0	0	0.0	181	94	11	6
15	**Jharkhand**	251	53	21.1	106	42.2	76	30.3	12	4.8	0	0.0	2	0.8	235	94	14	6
16	**Karnataka**	849	322	37.9	239	28.2	158	18.6	88	10.4	22	2.6	12	1.4	719	85	122	14
17	**Kerala**	1366	866	63.4	179	13.1	54	4.0	243	17.8	12	0.9	4	0.3	1099	80	259	19
18	**Madhya Pradesh**	1280	329	25.7	345	27.0	495	38.7	50	3.9	20	1.6	20	1.6	1169	91	90	7
19	**Maharashtra**	1623	280	17.3	441	27.2	760	46.8	86	5.3	19	1.2	13	0.8	1481	91	118	7
20	**Meghalaya**	21	15	71.4	2	9.5	0	0.0	3	14.3	1	4.8	0	0.0	17	81	4	19
21	**Odisha**	1013	535	52.8	248	24.5	37	3.7	158	15.6	14	1.4	3	0.3	820	81	175	17
22	**Pondicherry**	6	6	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	100	0	0

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
23	**Punjab**	192	96	50.0	15	7.8	14	7.3	58	30.2	2	1.0	6	3.1	125	65	66	34
24	**Rajasthan**	874	269	30.8	158	18.1	252	28.8	151	17.3	14	1.6	22	2.5	679	78	187	21
25	**Tamil Nadu**	618	195	31.6	163	26.4	201	32.5	28	4.5	7	1.1	7	1.1	559	90	42	7
26	**Telangana**	526	112	21.3	130	24.7	251	47.7	14	2.7	4	0.8	5	1.0	493	94	23	4
27	**Tripura**	19	13	68.4	0	0.0	0	0.0	5	26.3	1	5.3	0	0.0	13	68	6	32
28	**Uttar Pradesh**	554	273	49.3	168	30.3	67	12.1	42	7.6	2	0.4	2	0.4	508	92	46	8
29	**Uttarakhand**	37	15	40.5	1	2.7	7	18.9	1	2.7	1	2.7	2	5.4	23	62	4	11
30	**West Bengal**	538	252	46.8	94	17.5	40	7.4	116	21.6	24	4.5	11	2.0	386	72	151	28
	TOTAL	**13027**	**3781**	**29**	**3325**	**25.5**	**4685**	**36.0**	**908**	**7.0**	**130**	**1.0**	**98**	**0.8**	**11791**	**91**	**1136**	**9**

190 (1%) monitoring wells show no change in Water Level.

Annexure – XII

State-wise Decadal Water Level Fluctuation With Mean [Pre Monsoon(2009 to 2018)] and Pre Monsoon 2019

S.No.	Name of State	No. of wells analysed	Range in m				Rise						Fall						Rise		Fall	
			Rise		Fall		0-2 m		2-4 m		> 4 m		0-2 m		2-4 m		> 4 m					
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	**Andhra Pradesh**	714	0.01	7.26	6	9.32	166	23.2	18	2.5	10	1.4	348	48.7	122	17.1	48	6.7	194	27	518	73
2	**Arunachal Pradesh**	18	0.54	2.45	0.1	5.94	1	5.6	1	5.6	0	0.0	8	44.4	7	38.9	1	5.6	2	11	16	89
3	**Assam**	230	0.01	7.1	0.01	4.53	89	38.7	17	7.4	5	2.2	112	48.7	5	2.2	2	0.9	111	48	119	52
4	**Bihar**	619	0.01	5.34	0.01	11.65	172	27.8	20	3.2	3	0.5	349	56.4	46	7.4	24	3.9	195	32	419	68
5	**Chandigarh**	12	0.01	2.47	0.24	5.49	2	16.7	2	16.7	0	0.0	4	33.3	3	25.0	1	8.3	4	33	8	67
6	**Chhattisgarh**	602	0.01	14.65	0.01	15.34	143	23.8	58	9.6	36	6.0	253	42.0	71	11.8	28	4.7	237	39	352	58
7	**Dadra & Nagar Haveli**	18	0.08	2.39	0.06	8.75	1	5.6	1	5.6	0	0.0	9	50.0	4	22.2	3	16.7	2	11	16	89
8	**Daman & Diu**	11	0.04	2.66	0.02	0.52	5	45.5	2	18.2	0	0.0	2	18.2	2	18.2	0	0.0	7	64	4	36
9	**Delhi**	73	0	13.23	0.05	8.88	28	38.4	5	6.8	3	4.1	12	16.4	16	21.9	9	12.3	36	49	37	51
10	**Goa**	64	0.01	8.29	0	4.29	17	26.6	0	0.0	1	1.6	43	67.2	2	3.1	1	1.6	18	28	46	72

State-wise Decadal Water Level Fluctuation With Mean [Pre Monsoon(2009 to 2018)] and Pre Monsoon 2019

S.No.	Name of State	No. of wells analysed	Range in m				Rise						Fall						Rise		Fall	
			Rise		Fall		0-2 m		2-4 m		> 4 m		0-2 m		2-4 m		> 4 m					
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
11	**Gujarat**	697	0.01	12.36	0.02	18.96	169	24.2	59	8.5	32	4.6	284	40.7	77	11.0	76	10.9	260	37	437	63
12	**Haryana**	279	0.01	8	0.02	19.12	79	28.3	9	3.2	6	2.2	106	38.0	37	13.3	41	14.7	94	34	184	66
13	**Himachal Pradesh**	101	0.04	6.63	0.11	3.86	69	68.3	10	9.9	2	2.0	15	14.9	5	5.0	0	0.0	81	80	20	20
14	**Jammu & Kashmir**	204	0.01	4.29	0	4.32	78	38.2	7	3.4	1	0.5	104	51.0	12	5.9	2	1.0	86	42	118	58
15	**Jharkhand**	271	0.03	5.31	0.02	9.97	81	29.9	19	7.0	3	1.1	131	48.3	27	10.0	10	3.7	103	38	168	62
16	**Karnataka**	1098	0.01	14.72	0.0	17.22	157	14.3	34	3.1	26	2.4	595	54.2	207	18.9	79	7.2	217	20	881	80
17	**Kerala**	1427	0.0	7.01	0.0	10.09	623	43.7	31	2.2	7	0.5	701	49.1	48	3.4	13	0.9	661	46	762	53
18	**Madhya Pradesh**	1319	0.01	17.72	0.01	18.91	451	34.2	121	9.2	75	5.7	475	36.0	114	8.6	83	6.3	647	49	672	51
19	**Maharashtra**	1645	0.0	18.42	0.0	18.01	314	19.1	61	3.7	26	1.6	698	42.4	342	20.8	201	12.2	401	24	1241	75
20	**Meghalaya**	53	0.01	6.2	0.09	1.21	37	69.8	1	1.9	1	1.9	14	26.4	0	0.0	0	0.0	39	74	14	26
21	**Odhisha**	1064	0.01	7.07	0.01	4.78	593	55.7	110	10.3	27	2.5	311	29.2	19	4.0	4	0.4	730	69	334	31

State-wise Decadal Water Level Fluctuation With Mean [Pre Monsoon(2009 to 2018)] and Pre Monsoon 2019

S.No.	Name of State	No. of wells analysed	Range in m				Rise						Fall						Rise		Fall	
			Rise		Fall		0-2 m		2-4 m		> 4 m		0-2 m		2-4 m		> 4 m					
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
22	**Pondicherry**	6			0.13	2.58	0	0.0	0	0.0	0	0.0	5	83.3	1	16.7	0	0.0	0	0	6	100
23	**Punjab**	245	0.0	15.11	0.02	9.94	67	27.3	5	2.0	2	0.8	101	41.2	30	12.2	39	15.9	74	30	170	69
24	**Rajasthan**	893	0.0	14	0.01	18.43	202	22.6	51	5.7	48	5.4	324	36.3	119	13.3	145	16.2	301	34	588	66
25	**Tamil Nadu**	612	0.0	11.53	0.02	12.54	126	20.6	27	4.4	17	2.8	214	35.0	129	21.1	99	16.2	170	28	442	72
26	**Telangana**	557	0.01	10.15	0.01	13.97	149	26.8	23	4.1	16	2.9	186	33.4	84	15.1	96	17.2	188	34	366	66
27	**Tripura**	75	0.01	3.99	0.01	3.21	28	37.3	3	4.0	0	0.0	41	54.7	3	4.0	0	0.0	31	41	44	59
28	**Uttar Pradesh**	592	0	12.94	0	13.07	144	24.3	14	2.4	4	0.7	354	59.8	58	9.8	17	2.9	162	27	429	72
29	**Uttarakhand**	42	0.01	5.45	0.02	12.83	12	28.6	2	4.8	1	2.4	17	40.5	5	11.9	5	11.9	15	36	27	64
30	**West Bengal**	653	0.01	12.09	0	16.09	278	42.6	71	10.9	22	3.4	194	29.7	54	8.3	31	4.7	371	57	279	43
	TOTAL	**14194**					**4281**	**30.2**	**782**	**5.5**	**374**	**2.6**	**6010**	**42.3**	**1649**	**11.6**	**1058**	**7.5**	**5437**	**38.3**	**8717**	**61.4**

40 monitoring wells (0.3%) show no change in Water Level.

Annexure – XIII

State-wise Decadal Water Level Fluctuation With Mean [August (2009 to 2018)] and August 2019

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Rise		Fall	
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	Andhra Pradesh	706	0.01	10.5	0.01	9.54	197	27.9	21	3.0	7	1.0	299	42.4	125	17.7	55	7.8	225	32	479	68
2	Arunachal Pradesh	10	0.21	1.89	0.18	2.59	4	40.0	0	0.0	0	0.0	5	50.0	1	10.0	0	0.0	4	40	6	60
3	Assam	163	0.02	8.02	0.01	4.89	71	43.6	3	1.8	2	1.2	78	47.9	6	3.7	3	1.8	76	47	87	53
4	Bihar	598	0.01	5.26	0.02	8.54	165	27.6	26	4.3	3	0.5	295	49.3	76	12.7	33	5.5	194	32	404	68
5	Chandigarh	13	0.30	0.33	0.26	4.78	2	15.4	0	0.0	0	0.0	7	53.8	3	23.1	1	7.7	2	15	11	85
6	Chhattisgarh	450	0.01	10.76	0.01	13.89	105	23.3	21	4.7	8	1.8	222	49.3	56	12.4	37	8.2	134	30	315	70
7	Dadra & Nagar Haveli	17	0.10	1.53	0.21	1.23	14	82.4	0	0.0	0	0.0	3	17.6	0	0.0	0	0.0	14	82	3	18
8	Daman & Diu	3			0.01	0.37	0	0.0	0	0.0	0	0.0	1	33.3	2	66.7	0	0.0	0	0	3	100
9	Delhi	78	0.03	10.82	0.08	9.54	25	32.1	2	2.6	4	5.1	17	21.8	18	23.1	12	15.4	31	40	47	60
10	Goa	63	0.02	3.41	0.03	1.54	25	39.7	2	3.2	0	0.0	36	57.1	0	0.0	0	0.0	27	43	36	57
11	Gujarat	672	0.05	11.86	0.01	13.13	262	39.0	101	15.0	51	7.6	128	19.0	66	9.8	64	9.5	414	62	258	38
12	Haryana	250	0.01	4.54	0	9.54	99	39.6	10	4.0	2	0.8	80	32.0	34	13.6	25	10.0	111	44	139	56

State-wise Decadal Water Level Fluctuation With Mean [August (2009 to 2018)] and August 2019

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Rise		Fall	
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
13	Himachal Pradesh	95	0.02	7.27	0	13.08	53	55.8	7	7.4	3	3.2	29	30.5	2	2.1	1	1.1	63	66	32	34
14	Jammu & Kashmir	192	0.02	3.2	0.01	12.47	23	12.0	1	0.5	0	0.0	139	72.4	22	11.5	7	3.6	24	13	168	88
15	Jharkhand	288	0.01	5.77	0.01	7.99	105	36.5	18	6.3	4	1.4	117	40.6	32	11.1	12	4.2	127	44	161	56
16	Karnataka	1339	0.01	13.9	0.0	10.91	563	42.0	196	14.6	77	5.8	291	21.7	135	10.1	76	5.7	836	62	502	37
17	Kerala	1408	0.00	9.98	0.0	14.03	1026	72.9	163	11.6	20	1.4	181	12.9	13	0.9	2	0.1	1209	86	196	14
18	Madhya Pradesh	1267	0.01	15.91	0.01	13.22	573	45.2	260	20.5	86	6.8	212	16.7	90	7.1	45	3.6	919	73	347	27
19	Maharashtra	1614	0.01	11.14	0.0	18.66	723	44.8	158	9.8	73	4.5	380	23.5	158	9.8	118	7.3	954	59	656	41
20	Meghalaya	24	0.02	2.81	0.03	1.21	11	45.8	1	4.2	0	0.0	12	50.0	0	0.0	0	0.0	12	50	12	50
21	Odhisha	1255	0.01	9.04	0.01	6.5	862	68.7	67	5.3	14	1.1	296	23.6	11	0.9	3	0.2	943	75	310	25
22	Pondicherry	6			0.13	2.58	0	0.0	0	0.0	0	0.0	5	83.3	1	16.7	0	0.0	0	0	6	100
23	Punjab	228	0.07	8.84	0.01	9.49	51	22.4	7	3.1	6	2.6	82	36.0	50	21.9	32	14.0	64	28	164	72

State-wise Decadal Water Level Fluctuation With Mean [August (2009 to 2018)] and August 2019

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Rise		Fall	
			Rise		Fall		0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m					
			Min	Max	Min	Max	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
24	Rajasthan	977	0.02	15.62	0.02	18.3	309	31.6	112	11.5	89	9.1	239	24.5	93	9.5	130	13.3	510	52	462	47
25	Tamil Nadu	617	0.01	13.21	0.01	17.18	122	19.8	37	6.0	32	5.2	209	33.9	124	20.1	91	14.7	191	31	424	69
26	Telangana	559	0.03	14.78	0.01	16.32	202	36.1	57	10.2	25	4.5	149	26.7	55	9.8	71	12.7	284	51	275	49
27	Tripura	21	0.07	1.48	0.13	5.13	12	57.1	0	0.0	0	0.0	8	38.1	0	0.0	1	4.8	12	57	9	43
28	Uttar Pradesh	696	0.01	12.05	0	16.19	197	28.3	28	4.0	3	0.4	330	47.4	103	14.8	35	5.0	228	33	468	67
29	Uttarakhand	39	0.12	7.21	0.05	7.57	8	20.5	2	5.1	1	2.6	15	38.5	8	20.5	5	12.8	11	28	28	72
30	West Bengal	695	0.01	16.24	0.01	18.33	169	24.3	26	3.7	14	2.0	299	43.0	92	13.2	95	13.7	209	30	486	70
	TOTAL	**14343**					**5978**	**41.7**	**1326**	**9.2**	**524**	**3.7**	**4164**	**29.0**	**1376**	**9.6**	**954**	**6.7**	**7828**	**55**	**6494**	**45**

21 monitoring wells (0.1%) show no change in Water Level.

Annexure – XIV

State-wise Decadal Water Level Fluctuation With Mean [Nov (2009 to 2018)] and Nov 2019

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Rise		Fall	
			Rise		Fall		0-2 m		2-4 m		>4 m				2-4 m		>4 m					
			Min	Max	Min	Max	No	No	%	%	No	%	No	%	No	%	No	%	No	%	No	%
1	Andhra Pradesh	700	0.01	8.2	0	19.4	417	59.6	64	9.1	13	1.9	143	20.4	33	4.7	29	4.1	494	71	205	29
2	Arunachal Pradesh	8	0.37	0.97	0.03	1.48	3	37.5	0	0.0	0	0.0	5	62.5	0	0.0	0	0.0	3	38	5	63
3	Assam	119	0.02	13.6	0.01	2.47	66	55.5	3	2.5	1	0.8	46	38.7	3	2.5	0	0.0	70	59	49	41
4	Bihar	612	0.02	6.58	0.01	7.76	418	68.3	57	9.3	2	0.3	115	18.8	14	2.3	6	1.0	477	78	135	22
5	Chandigarh	8	9.4	9.4	0.13	12.76	0	0.0	0	0.0	1	12.5	5	62.5	1	12.5	1	12.5	1	13	7	88
6	Chhattisgarh	543	0.01	7.73	0.01	15.14	261	48.1	37	6.8	11	2.0	186	34.3	34	6.3	14	2.6	309	57	234	43
7	Dadra & Nagar Haveli	17	0.06	4.17	0.31	0.99	11	64.7	2	11.8	1	5.9	3	17.6	0	0.0	0	0.0	14	82	3	18
8	Daman & Diu	9	0.08	1.1	0.04	0.13	5	55.6	0	0.0	0	0.0	4	44.4	0	0.0	0	0.0	5	56	4	44
9	Delhi	81	0.01	12.55	0.01	12.47	25	30.9	3	3.7	4	4.9	18	22.2	16	19.8	15	18.5	32	40	49	60
10	Goa	69	0.03	4.7	0.03	4.35	42	60.9	4	5.8	1	1.4	19	27.5	2	2.9	1	1.4	47	68	22	32
11	Gujarat	819	0	18.18	0.01	14.53	348	42.5	188	23.0	144	17.6	92	11.2	27	3.3	20	2.4	680	83	139	17

State-wise Decadal Water Level Fluctuation With Mean [Nov (2009 to 2018)] and Nov 2019

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Rise		Fall	
			Rise		Fall		0-2 m		2-4 m		>4 m				2-4 m		>4 m					
			Min	Max	Min	Max	No	No	%	%	No	%	No	%	No	%	No	%	No	%	No	%
12	Haryana	272	0.01	14.72	0.01	17.38	86	31.6	8	2.9	12	4.4	83	30.5	46	16.9	37	13.6	106	39	166	61
13	Himachal Pradesh	105	0.03	6.8	0.01	8.96	60	57.1	8	7.6	6	5.7	29	27.6	1	1.0	1	1.0	74	70	31	30
14	Jammu & Kashmir	201	0.01	6.15	0	6.09	119	59.2	6	3.0	1	0.5	69	34.3	5	2.5	1	0.5	126	63	75	37
15	Jharkhand	272	0.05	7.93	0.02	6.91	175	64.3	55	20.2	7	2.6	29	10.7	4	1.5	2	0.7	237	87	35	13
16	Karnataka	1220	0.01	17.66	0	16.01	609	49.9	216	17.7	102	8.4	207	17.0	42	3.4	43	3.5	927	76	292	24
17	Kerala	1419	0.01	11.36	0.01	4.62	979	69.0	87	6.1	11	0.8	330	23.3	11	0.8	1	0.1	1077	76	342	24
18	Madhya Pradesh	1324	0.01	16.36	0.01	13.54	600	45.3	304	23.0	221	16.7	142	10.7	37	2.8	20	1.5	1125	85	199	15
19	Maharashtra	1613	0.01	14.8	0.01	16.78	773	47.9	308	19.1	164	10.2	284	17.6	47	2.9	33	2.0	1245	77	364	23
20	Meghalaya	13	0.13	3	0.06	1.53	5	38.5	1	7.7	0	0.0	7	53.8	0	0.0	0	0.0	6	46	7	54
21	Nagaland	3	2.58	2.58	1.68	3.07	0	0.0	1	33.3	0	0.0	1	33.3	1	33.3	0	0.0	1	33	2	67
22	Odhisha	1231	0.01	8.16	0.01	7.44	725	58.9	52	4.2	2	0.2	425	34.5	26	2.1	1	0.1	779	63	452	37

State-wise Decadal Water Level Fluctuation With Mean [Nov (2009 to 2018)] and Nov 2019

S. No.	Name of State	No. of wells Analysed	Range in m				Rise						Fall						Rise		Fall	
			Rise		Fall		0-2 m		2-4 m		>4 m				2-4 m		>4 m					
			Min	Max	Min	Max	No	No	%	%	No	%	No	%	No	%	No	%	No	%	No	%
23	Pondicherry	6	0.15	0.58	0.06	3.04	4	66.7	0	0.0	0	0.0	1	16.7	1	16.7	0	0.0	4	67	2	33
24	Punjab	212	0.01	8.88	0.03	15.18	53	25.0	9	4.2	5	2.4	81	38.2	33	15.6	31	14.6	67	32	145	68
25	Rajasthan	1005	0.01	18.4	0	19.8	319	31.7	142	14.1	160	15.9	204	20.3	78	7.8	96	9.6	621	62	378	38
26	Tamil Nadu	627	0.01	14.69	0.02	14.6	233	37.2	111	17.7	79	12.6	119	19.0	51	8.1	34	5.4	423	67	204	33
27	Telangana	560	0	19.71	0.07	14.64	237	42.3	108	19.3	98	17.5	62	11.1	30	5.4	24	4.3	443	79	116	21
28	Tripura	21	0.04	0.67	0.02	3.96	11	52.4	0	0.0	0	0.0	9	42.9	1	4.8	0	0.0	11	52	10	48
29	Uttar Pradesh	659	0.01	9.25	0.01	11.53	299	45.4	55	8.3	16	2.4	219	33.2	46	7.0	23	3.5	370	56	288	44
30	Uttarakhand	49	0.03	4.96	0.13	9.96	13	26.5	1	2.0	1	2.0	17	34.7	7	14.3	10	20.4	15	31	34	69
31	West Bengal	702	0	8.61	0.01	13.65	309	44.0	49	7.0	15	2.1	239	34.0	37	5.3	53	7.5	373	53	329	47
	Total	**14499**					**7205**	**49.7**	**1879**	**13.0**	**1078**	**7.4**	**3193**	**22.0**	**634**	**4.4**	**496**	**3.4**	**10162**	**70**	**4323**	**30**

14 monitoring wells (less than 1%) show no change in Water Level.

State-wise Decadal Water Level Fluctuation With Mean [January (2010 to 2019)] and January 2020

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
1	Andhra Pradesh	704	351	49.9	57	8.1	22	3.1	219	31.1	30	4.3	24	3.4	430	61	273	39
2	Arunachal Pradesh	9	3	33.3	0	0.0	0	0.0	5	55.6	1	11.1	0	0.0	3	33	6	67
3	Assam	152	83	54.6	11	7.2	2	1.3	51	33.6	4	2.6	1	0.7	96	63	56	37
4	Bihar	628	405	64.5	34	5.4	7	1.1	149	23.7	22	3.5	9	1.4	446	71	180	29
5	Chandigarh	13	1	7.7	0	0.0	0	0.0	6	46.2	2	15.4	4	30.8	1	8	12	92
6	Chhattisgarh	517	234	45.3	56	10.8	18	3.5	170	32.9	28	5.4	10	1.9	308	60	208	40
7	Dadra & Nagar Haveli	17	12	70.6	0	0.0	0	0.0	5	29.4	0	0.0	0	0.0	12	71	5	29
8	Daman & Diu	10	7	70.0	0	0.0	0	0.0	2	20.0	1	10.0	0	0.0	7	70	3	30
9	Delhi	83	30	36.1	4	4.8	4	4.8	20	24.1	13	15.7	12	14.5	38	46	45	54
10	Goa	71	35	49.3	5	7.0	1	1.4	26	36.6	4	5.6	0	0.0	41	58	30	42
11	Gujarat	795	320	40.3	150	18.9	151	19.0	123	15.5	23	2.9	26	3.3	621	78	172	22

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
12	Haryana	213	56	26.3	6	2.8	8	3.8	86	40.4	27	12.7	30	14.1	70	33	143	67
13	Himachal Pradesh	103	64	62.1	10	9.7	8	7.8	18	17.5	1	1.0	2	1.9	82	80	21	20
14	Jammu & Kashmir	225	150	66.7	26	11.6	3	1.3	42	18.7	3	1.3	1	0.4	179	80	46	20
15	Jharkhand	275	163	59.3	33	12.0	9	3.3	62	22.5	6	2.2	2	0.7	205	75	70	25
16	Karnataka	1037	275	26.5	80	7.7	44	4.2	479	46.2	105	10.1	53	5.1	399	38	637	61
17	Kerala	1416	803	56.7	29	2.0	11	0.8	548	38.7	18	1.3	7	0.5	843	60	573	40
18	Madhya Pradesh	1325	620	46.8	303	22.9	168	12.7	172	13.0	35	2.6	27	2.0	1091	82	234	18
19	Maharashtra	1675	757	45.2	306	18.3	167	10.0	318	19.0	87	5.2	39	2.3	1230	73	444	27
20	Meghalaya	24	11	45.8	1	4.2	0	0.0	10	41.7	2	8.3	0	0.0	12	50	12	50
21	Odhisha	1249	853	68.3	73	5.8	6	0.5	299	23.9	15	1.2	2	0.2	932	75	316	25
22	Pondicherry	6	0	0.0	0	0.0	0	0.0	6	100.0	0	0.0	0	0.0	0	0	6	100
23	Punjab	217	59	27.2	13	6.0	9	4.1	83	38.2	24	11.1	29	13.4	81	37	136	63
24	Rajasthan	978	282	28.8	118	12.1	155	15.8	239	24.4	81	8.3	89	9.1	555	57	409	42

S. No.	Name of State	No. of wells Analysed	Rise						Fall						Total			
			0-2 m		2-4 m		>4 m		0-2 m		2-4 m		>4 m		Rise		Fall	
			No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
25	**Tamil Nadu**	645	267	41.4	62	9.6	46	7.1	175	27.1	56	8.7	38	5.9	375	58	269	42
26	**Telangana**	559	259	46.3	97	17.4	75	13.4	68	12.2	33	5.9	27	4.8	431	77	128	23
27	**Tripura**	22	16	72.7	0	0.0	0	0.0	5	22.7	1	4.5	0	0.0	16	73	6	27
28	**Uttar Pradesh**	703	345	49.1	63	9.0	20	2.8	225	32.0	37	5.3	13	1.8	428	61	275	39
29	**Uttarakhand**	41	20	48.8	5	12.2	3	7.3	5	12.2	4	9.8	4	9.8	28	68	13	32
30	**West Bengal**	737	335	45.5	50	6.8	18	2.4	232	31.5	47	6.4	55	7.5	403	55	334	45
	TOTAL	**14449**	**6816**	**47.2**	**1592**	**11.0**	**955**	**6.6**	**3848**	**26.6**	**710**	**4.9**	**504**	**3.5**	**9363**	**65**	**5062**	**35**

24 monitoring wells (less than 1%) show no change in Water Level